

Enunciating the Core principles of Twenty-first Century Historiography: Some additional extrapolations and inferences from our studies and observations on Historiography

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Abstract

This paper extends the concepts delineated in our earlier paper 'Historiography by Objectives: A new approach for the study of history within the framework of the proposed Twenty-first Century school of Historiography' and uses them to enunciate the core principles which we believe will form a part of the proposed Twenty-first century school of Historiography. This paper therefore strives to provide the vehicular platform upon which the objectives set forth in the aforesaid paper should be ideally nurtured and furthered. This paper additionally strives to buttress and substantiate our proposals with further arguments. The Twenty-first century school of historiography, it must be stated at the very outset, does not stem from any kind of a rebellious, a contrarian or a recalcitrant approach but intends to ensure that the field is suitably modernized keeping in mind the requirements of the Twenty-first century without jettisoning appreciable or profitable aspects of existing approaches. This paper attempts, at the same time to steer clear of the perils and pitfalls of postmodernism and intellectual nerdism and forge a new trajectory altogether. This approach also seeks to be as commodious and all-encompassing as possible by proactively embracing as many existing approaches as possible except dour and anachronistic ones, and others that have outlived their utility. It also seeks to formulate dialectical approaches in all facets and endeavours. We also argue that this is not only because all existing approaches are inadequate to cater to the rapidly changing requirements of the Twenty-First Century but also because we are already at the thin end of the wedge and existing approaches are inevitably fraught with unsavoury consequences, and will throw up counter-reactions in the longer term. As noted in our earlier papers, dialectical approaches and approaches based on critical analysis and scientific method would be the key to grappling with the sobering realities and the changed requirements of the Twenty-first century and would be the keystone to further progress across varied disciplines. This paper also emphasizes the proactive aspect of historiography, as this is at the core of all efforts to make it a meaningful and a modern discipline. This paper also delineates the social duties and functions of a historian and reinforces his role and duties in ushering in rapid social and cultural change and expediting scientific progress across disciplines. 'Historiography by Objectives' and other attendant approaches, first mooted in the aforesaid paper, continue, of course, to be an inalienable part of the overall proposals of this paper.

Introduction

What is historiography?

Humans have always had a strong affinity for their traditions and their culture and have always taken a keen interest to discover their past. This has been, from period immemorial, one of the hallmarks and defining characteristic of the human species, and one that is not present in any other species. History, and historical consciousness have also been always inexorably and inseparably intertwined with culture and ethnic identity, and history therefore has always been a sensitive subject which has often evoked strong and very emotive passions in many quarters. It therefore, comes as no surprise that Historiography as a formal field of study began to evolve into its present form from very early times, and a keen and an acute interest in the past has been known from time immemorial.

The term historiography may be defined as a body of historical work on various topics pertaining to a study of the past, and various inter-related fields which come under the canopy and umbrella of historiography. The term historiography also refers to the art and the science of writing history. Historiography may also be defined as "The history of history", and encompasses various tools and techniques used therein. Historiography is also often defined and studied by topic, examples being the "Historiography of the French Revolution," the "Historiography of the Spanish Inquisition," the "Historiography of Ancient India" or the "Historiography of Ancient China". The term Historiography has also seen the development of highly specialized approaches, methods and tools employed for the study of history.

The direction of research in the field of historiography has broadened and changed over time, beginning with traditional and now possibly very outdated views of history as comprising mere narratives of events to Marxist historiography with all its emphasis on historical materialism and post-modern schools of historiography which have evolved in very recent times. In the past couple of years, there has been an acute interest in formulating newer approaches, particularly in areas such as cultural studies, and the field is now set for a major renaissance and renewal with a plethora of new innovative approaches and techniques. Several debates undoubtedly continue well into the present day, and among them is a controversy as to whether historiography is to be construed and classified as an art or as a science.¹

Historiography in its simplest definition, is a formal study of the art and methods of writing history and research pertaining to various aspects of history, subtopics within the umbrella of history and several other allied fields. It may also be defined as a body of knowledge containing the principles, theories, or methodology of scholarly historical research and presentation. Historiography is the writing of history based on a critical examination of varied sources, the selection of well-balanced data from authentic materials, and the synthesis of particulars into a narrative that will stand the test of time and rigorous and critical scrutiny. History may also be defined as "The study of past events, particularly in human affairs with profound and far-reaching implications for the future, and the study of a series of events in relation to humans and human actions."

Definition of history

Some of the earliest definitions of history have been given by the Greeks and the Romans. Let us now proceed to examine some definitions of history given to us since ancient times.

According to Dionysius of Halicarnassus, history had to contain the quintessence of human experience which provided universal values for civilization, and provided guiding principles for future generations as well. The great Greek philosopher and polymath Aristotle defined history as "The manifestation of human nature, intentions and motives over the millennia which differed in degree and not in their basic nature." According to Henry Johnson, "History is at a broad level, a summary of everything that has ever happened". According to the Scottish philosopher Thomas Carlyle, "History is nothing but the biography of great men, and is a record of human accomplishment". According to the English Catholic

¹ Historiography by Objectives: A new approach for the study of history within the framework of the proposed Twenty-first Century school of Historiography Sujay Rao Mandavilli ELK International Journal of Social Science Volume 1 Issue 2 (2015)

historian Lord Acton, "History is a story of the unfolding march to freedom". Similar ideas were propounded by Anne Robert Jacques Turgot and Marquis de Condorcet as well. Bolybius and Theocydides have defined history as "The story of things only worthy of being remembered, excluding all sundry events which do not have historical value, and that only unique, significant and remarkable happenings would figure in it, as for example, scientific achievement that brings utility, knowledge and power to us, the artistic achievements that confer on us truth, beauty and pleasure, and the intellectual growth which makes us rich in culture, philosophy and religion." According to British historian A.L. Rowse, "History is a record of the life of men in their geographical and physical environment". According to Seignbos, "History is a science of reasoning." According to German historian Ernest Bernheim, "History is a science that investigates and presents in their context of psycho-physical causality the facts determined by space and time of the evolution of men in their individual as well as typical and collective activity as human beings." According to French philosopher Jean-Jacques Rousseau, "History is the art of choosing from the many lies, one which most closely resembles the truth."

According to Gustavson, "History is the mountaintop of human knowledge from whence the doings of our own generation may be scanned and fitted into a proper dimension". According to Benedetto Croce, "All history is one supreme spirit which is indivisible, but has four different aspects- art, ethics, logic and economics- which emerge from the basic unity of the spirit." According to contemporary historian M.I Findlay, "History is any sequence of events traced in their relations, and is a study of cause and effect." According to Henry Johnson, "History in the broadest sense is everything that ever happened". According to Professor Maitland, "History is what people have done and said, above all what they have thought."

According to Professor of Dutch History G.J Renier, "History is the story of men living in societies, in which group activity, collective response to creative thoughts and sociability and will to serve society and act in the greater interests of common good, is of paramount importance." According to German-born British Historian G.R. Elton, "History is concerned with all those human beings, sayings, thoughts, deeds and sufferings which have occurred in the past and have left present deposits and it deals with them from the point of view of constant change." According to Belgian Historian Henri Pirenne, "History is the story of men living in societies and their deeds." Like Hegel and others, who insisted on the role of great men in history, Thomas Carlyle argued that history was the biography of a few central individuals, heroes, stating, "The history of the world is nothing but the biography of great men."

According to John J.Anderson, "History is a narration of the events which have happened among mankind, including an account of the rise and fall of nations, as well as of other great changes which have affected the political and social condition of the human race." Some other philosophers have argued on the harnessing of past knowledge and wisdom for future benefit. According to English statesman and philosopher Sir Francis Bacon, "History as a discipline seeks to make men wise. Wisdom being the ability to distinguish between right and wrong and providing an intelligent contemplation of life. It is the capacity to see all things purely as objects of understanding, and is the experience of the world which may be looked upon as a kind of test, for which reflection and knowledge would act as the commentary."²

Furay and Salevouris (1988) have defined historiography as "the study of the way history has been and is written — the history of historical writing... When a person studies 'historiography' he does not study the events of the past directly, but the changing interpretations of those events in the works of individual historians."

Approaches to historiography

Let us now briefly discuss the core tenets and approaches associated with various schools of historiography since ancient times beginning with the Greeks who are first believed to have pioneered the field of historiography way back in the 6th Century BC.

² Conal Furay and Michael J.Salevouris: The methods and skills of writing history. A Practical Guide. 3rd ed. Wheeling, IL: Harlan Davidson, Inc., 2010.

Greek historiography

Historiography as it is known today, began during the time of the Greeks, and historiography began to take shape around the time of the Persian Invasion around 600 BC. The very term history is considered to be of Greek origin and means exploration, inquiry and research. The first formal history was believed to have been written by the Ancient Greek historian Ephorus who lived in the 4th century BC and was a disciple of rhetorician Isocrates. At around this time, history began to evolve distinctly from myths, poetry and ballads. This work has been lost, but its influence is visible in the works of his son Demophilus, Polybius (203–120 BC) and Diodorus (1st century BC) who gave very detailed accounts of the world they lived in and complemented it with deep analytical thought. Herodotus (484- 425 BC) is considered by many to be the father of historiography and also pioneered investigative techniques in the field of historiography. It is believed he largely drew his inspiration from another early Greek historian by the name of Hecataeus of Miletus who lived between 550 BC and 476 BC. Herodotus is chiefly remembered for his fast-paced style of writing, ability to engage readers, and his first-hand accounts of events. Herodotus was succeeded by other historians such as Thucydides, Xenophon, Demosthenes, Plato, and Aristotle. Poets like Homer and Hesiod also wrote many poems with historical content. Athenian historian Thucydides also contributed greatly to historiography. Although he was not as famous as Herodotus, he was known for his meticulousness of approach, his deep and very critical analysis of events, his accuracy and his ability to construct and derive general principles from an analysis of historical data. Posidonius and Polybius were other eminent Greek historians.

Greek Historiography is also well-known for its rational and meticulous approach to issues. The historical period of Ancient Greece is unique in world history as this is the first period associated with a well-developed historiography noted for its comprehensiveness of analysis and depth of thought, while earlier ancient history or proto-history is only attested much more indirectly, and to the extent it existed, is considered to be of lower quality and caliber and did not encompass scientific methods to any degree. The Greeks, on the whole, set very high standards of scholarship in the nascent field of historiography, incubating several core and critical principles in the field, and eventually handing over the baton to the Romans.^{3 4}

Roman historiography

Roman historiography greatly owes its origins to Greek historiography, which critically influenced its development from very early times. The Romans already had several models to base their works upon, such as that of Herodotus (c. 484 – 425 BCE) and Thucydides (c. 460 – c. 395 BCE). The Greeks had set high standards of excellence for Roman historians to follow. Roman historians were therefore considered to be less innovative and more imitative, as they borrowed heavily from Greek sources and only modified them to suit their own needs. This was largely and chiefly because of the Greek influence on Rome during the Roman subjugation of Greece. Although the Romans had triumphed politically, they were heavily influenced by Greek culture and traditions. Roman historiographical forms were already beginning to morph from the Greek ones however, and were beginning to voice very Roman concerns and had already begun to evolve in distinct directions.

The most well-known preceptor of Roman historiography was Quintus Fabius Pictor, who is also popularly known as the “Founder of Historiography”. Unlike the Greeks, Roman historiography did not start out with an oral historical tradition. The Roman style of history was based on the way the Annals of the Pontifex Maximus, or the *Annales Maximi*, were recorded. Before the second Punic war, there was no historiography in Rome, but after, it was needed to commemorate this important occasion.

Interestingly, Quintus Fabius Pictor mostly wrote in Greek, using Olympiad dating and a Hellenistic style. Fabius Pictor’s style of historiography defending the Roman state and its actions, and making heavy use of propaganda, eventually went on to become a hallmark of Roman historiography. Cato the Censor was the greatest of the early Roman historians, who rose from a very humble background to

³ Companion to Historiography: Michael Bentley Routledge 1997

⁴Historiography: Ancient, Medieval, and Modern, Third Edition
By Ernst Breisach University of Chicago Press, 1997

become one of the greatest Historians of all times. Livy, Cornelius Tacitus and Antipater were other great historians of Rome. With the arrival of Cato the Censor who lived between 234 and 149 BC, the character of Roman history began to change somewhat. Roman historiography borrowed heavily from the Greeks, but was less analytical in approach and often lacked in rigour and depth. ^{5 6 7 8 9}

Historiography in China

In China, the oldest history was recorded in the oracle bone script and is believed to date to around the end of the second millennium BC. The Zuo Zhuan, by Zuo Qiuming in the 5th century BC, is considered by some to be the earliest written of narrative history in the world. The Spring and Autumn Annals, the official chronicle of the State of, is one of the earliest surviving historical texts in the world.

Historiography in Japan

The earliest works of history produced in Japan were the Rikkokushi, a corpus of national histories covering the history of Japan from its early unreliable mythological beginnings until the 9th century AD.

Historiography in India

Historiography in India or the absence of it, is one of the most bewildering aspects of Indian culture. According to Raychaudhuri, "Historiography was one of the least developed areas of ancient Indian culture. The mythological texts, the Puranas, however did contain lists of dynasties which contained rudimentary material for political history. A few texts from the Hindu 'middle ages' also record the achievements of individual monarchs or the history of regional dynasties. Systematic chronicles of political events really begin with Muslim chroniclers." (Raychaudhuri 1988:205). ¹⁰

There is also some historical information available in the vast corpus of Buddhist literature, and new discoveries are being made all the time such as the recent discovery of early Buddhist manuscripts in Gandhara. ¹¹

In addition, only a very small percent of the Indus Valley civilization is excavated (around 5% to 10% perhaps with major cities lying unexcavated) and the Indus script was clearly logo-syllabic as discussed by us in earlier papers. ^{12 13} There are therefore many avenues to be explored here, and multi-disciplinary approaches may help greatly.

Church Historiography

Church Historiography began to assume a very distinct form from very early times. The Christians had a very strong sense of history, particularly religious history. However, a chief attribute of Christian historiography was that it was oriented to their religious needs. Christian historians greatly dominated the field of historiography from the 5th century AD to the 13th Century AD. Church historiography left an indelible mark on other fields of historiography as well. Noted church historiographers were St.

⁵ (originally: Geschichte ist ... ein Dialog Zwischen Gegenwart und Vergangenheit.)— Edward Hallet Carr. 1961. What Is History? New York: Vintage Books.

⁶ History: Its theory and its method B. Sheik Ali Second Edition McMillan

⁷ Concepts and Methods of Historiography Dr K'L Khurana Lakshmi Narain Agarwal Publications, 2006

⁸ An introduction to Historiography Bikash Bhattacharya 2011

⁹ John J. Anderson. 1876. A Manual of General History.

¹⁰ Companion to Historiography, edited by Michael Bentley Routledge 1997

¹¹ The University of Washington Early Buddhist Manuscripts Project". www.ebomp.org.

¹² Reconfirmation and Reinforcement of the Indus Script Thesis: A Logical Assessment and Inquiry as to the Elusive and Enigmatic Nature of This Script, Sujay Rao Mandavilli *The IUP Journal of History and Culture*, Vol. V, No. 1, pp. 7-43, January 2011

¹³ Why the Indus Script WAS true writing and why a larger corpus of texts existed in the Indus Valley civilization: Simple proof addressed to mainstream researchers & archaeologists Sujay Rao Mandavilli *International Journal of Philosophy and Social Sciences* 2013

Augustine and Salvian, and bishops and other religious leaders also played a critical role in the development of church historiography.

Medieval, Enlightenment and Post-Enlightenment Historiography

Arab Historiography is even older than Islam, but was revitalized and reinstituted after the advent of Islam and made a bold and a valiant attempt to reconcile ancient Greek methodologies in historiography with Church historiography. The Arabs also had a strong sense of history like the Jews and the Christians. Historiography in general also made steady progress during this era and Islamic scholars introduced several new techniques and methods such as Isnad which means a chain of authorities through which an event could be corroborated and cross-verified. Arab tradition continued even after the decline of Arab historiography and influenced other schools of thought. Great Islamic scholars were Ibn Khaldun, Waqidi and Al-Madaini. Church historiography which first evolved in a religious context, in the 5th Century AD also made great progress during this era, and brought new philosophical interpretations to history. Enlightenment historiography which lasted from the 1600's to the 1800's reflected the vast changes brought about in that era and was characterized by pragmatism and economic emancipation through historiography. Bolingbroke, Bentham, Macaulay, Voltaire, Montesquieu and Mill belonged to this school.

Towards the end of this era, there was a heightened interest in the histories of countries such as India due to colonialism and expansionism of European powers. However, such scholarship was not entirely bereft and devoid from racism and colonial prejudices. Noted English Historians of this era included Edward Gibbon and Thomas Carlyle. Later English historians included Henry Thomas Buckle and Arnold Toynbee. There were other trends in this era too. For example, Romanticism emphasized romantic and fanciful constructs while the Positivist school emphasized a logical and a critical analysis of past events to understand human motives and identify trends.

The German school of Historiography

The German school of historiography has left a profound impact on the modern world. Hegel was one of the German philosophers of this age. His concept of dialectics, which also meant discussion, was an idea where a reconciliation between thesis and anti-thesis led to synthesis. This idea influenced Karl Marx greatly and one of the key tenets of Marxism and Marxist historiography, though in greatly modified form. Ranke was another great German historiographer who played a major role in bringing a scientific method to historiography, and contributed greatly to philosophy as well.

Karl Marx was a great thinker and philosopher who lived in the middle of the Nineteenth, but is today, also considered to be one of the most controversial men in human history. While he may have had a large number of detractors, both in his time and after, few will deny that he was one of the most influential men to have ever lived, and that his ideas had a profound effect in shaping the course of human and political history thorough a major part of the Twentieth century. Karl Marx embraced many core aspects of Hegel's dialectical methodologies, but in a highly modified form. According to Marx, most problems could be explained only in material or economic terms, and this concept is known as Historical Materialism. According to Marx, non-material aspects of human existence such as art, literature and philosophy were merely determined by economic factors of conditions, and Economic factors took precedence over all other factors in determining social consciousness. Marx's ideas on history were followed by many parts in the world, including in many countries which did not consider themselves to be communist or socialist. Marxist historians who do not subscribe to mainstream Marxist philosophy tend to call themselves 'marxist' (starting with an 'm' in lower case), while those who do call themselves 'Marxist' (starting with an 'M' in upper case). Marxist historiography has made singular contributions to the history of the working class, oppressed nationalities, and the methodology of history from below. Few would deny that Marx was highly criticised both in his lifetime and after, both for his ideas on economics and history, and criticisms of his philosophy and historical methods have been many. ¹⁴

¹⁴ Companion to Historiography Edited by Michael Bentley, Routledge, London and New York 1997

Modern trends in historiography

Major changes have occurred in the field of historiography since the time of Karl Marx, and the field is still constantly evolving and changing to encompass newer vistas and horizons. With a profusion of new techniques and tool, the field is likely to see major advancements in the decades to come. Let us now discuss some of the major changes that have taken place in the field of historiography since the field of Karl Marx. In recent times, history has been seen as more of a science than an art. An emphasis has been made on its inter-relationship with Geography, Economics, Sociology, Psychology, Archaeology, Anthropology, Philology and other sciences. It has also been used as a tool to draw lessons from the past, analyse events scientifically and to predict future events. Scholars such as Prof E.H. Carr, Vico, Collingwood, Comte, Spengler and J.B.Bury have also supported the view that history is a science. The Annales School has been influential in setting the agenda for historiography in many countries, and has helped incorporate social scientific methods into history, with an emphasis on social themes over political themes, and an amalgam with Marxist thought. New trends in historiography also include Cliometrics, Comparative history Cultural history, Cultural history, history of art, history of literature, subaltern history or history from below etc. ¹⁵

Modern schools of Historiography

Marxist historiography

Marxist historiography is a school of historiography heavily influenced by Marxist thoughts and ideas. One of the core principle of Marxist historiography is the centrality of social class and economic constraints in determining historical outcomes and an emphasis on historical materialism. Marxist historiography in its orthodox and canonical form is teleological and deterministic in that is generally posits an origin in history at the start of the revolution of the proletariat. Marxist Historians who use Marxist methodology in historiography, but do not endorse mainstream Marxist economic or political thought, describe themselves as marxist historians beginning with a lowercase M. Marxist historiography has made stellar contributions to the history of the working class, subaltern studies and history from below. A famous quote from Marx is given below: "It is not the consciousness of men that determines their existence, but their social existence that determines their consciousness." ¹⁶ The drawbacks and disadvantages of Marxist historiography were discussed at significant length in our previous paper and it would be pointless to reiterate them here. Nonetheless, few would agree that such approaches in their canonical and undiluted form, have already begun to be associated with senility, and consequently such approaches are already in slow but terminal decline throughout the world. Some Marxist historians in the Indian context also appear to have demonstrated a pathological dislike for wide-ranging and comprehensive approaches and reconciliation between different schools of thought. In view of its blatant deficiencies, inadequacies and contradictions, some scholars have already opined that aspects of this school of thought are not just already outdated, and may need to be re-examined in the light of the changed circumstances of the Twenty-first century.

Annales

School

The Annales School is a school of historiography whose basic tenets were first formulated by French historians in the 20th century. This school of historiography owes its name to the contemporary French journal "Annales d'histoire économique et sociale", This school played a key role in setting the agenda for historiography in France and elsewhere, and introduced social scientific methods into historiography, with a greater thrust social aspects of Historiography, and a more global and an integrated outlook and long-term approaches, Lucien Febvre, Henri Hauser, Mark Bloch and later Fernand Braudel played key

¹⁵ Peter Burke, French Historical Revolution: The Annales School 1929-89 (1990), Polity Press

¹⁶ Karl Marx, Preface to "A Contribution to the Critique of Political Economy"

roles in setting the direction of this school of Historiography. Even though this approach is at the relatively high-end of the totem pole as far as existing approaches go, it is probably inadequate to address the challenging requirements or contemporary times. Even more unfortunately, the concepts put forth in the school seem to be surrendering the predominance to a hodgepodge of post-modernist ideas and this is something that one must solemnly vow to fight against tooth and nail.

Other schools of Historiography

Let us now review other approaches to historiography and significant schools of thought, both modern and pre-modern. Big History examines history across large timeframes through a multi-disciplinary approach. Big History gives a focus on the alteration and adaptations in the human experience. Cliometrics refers to the application of economic theory, econometric techniques, and other mathematical and scientific methods to the study of history, particularly social and economic history. Comparative history is a comparative analysis of different societies or sharing similar traits and characteristics. Counterfactual history, or virtual history, is a form of historiography which attempts to answer "what if" questions known as counterfactuals. It explores history by proposing scenarios in which it is assumed that historical events did not take place at all or had completely different outcomes. The term cultural history refers to a critical analysis of cultural traditions. The history of ideas is a field of research in history that deals with the expression, preservation, and change of human ideas over time. Political history is the analysis of political events, movements, and leaders. The Big Man School studies the histories of great men and their impact on society. Social history refers to the study of social trends. Whig Historiography is an approach that presents human endeavour as culminating in the modern values of liberty, personal freedoms and enlightenment. Microhistory is the study of an extremely small political or economic unit such as a village. Quantitative history is an approach to historiography which makes extensive use of statistical data. The Rankean approach to historiography seeks to avoid presentism by seeing the past in a unique light and from the point of view of contemporaneous considerations. Progressive Historiography emphasized class conflict in American history. The New Left school of Historiography sees history as a struggle between classes particularly in the American context.

Postmodernism in History

Postmodernism as applied to historiography has many connotations. It has been equated with modern and new-fangled ideas and concepts and an offbeat and an unconventional approach to historiography. It has had healthy ramifications and has fostered a study of cultural and social history. Many postmodernist historians have also begun to challenge many long-held assumptions in the field of historiography. On the other hand, these kind of approaches have often let the historian's imagination run riot, and have ignored the historian's social responsibility in many situations. Postmodernism also includes critical interpretations of several aspects of the Twenty-first century such as culture, literature, history, art, philosophy, linguistics, economics, and fiction. There may be no single postmodernist school: as a matter of fact, postmodernism encapsulates an array of different approaches devised by different scholar with different, and often competing interests.

Nationalist historiography in India

The Indian Nationalist School of historiography arose from the desire to set right alleged biases and prejudices in Colonial historiography particularly in the works of English scholars such as James Mill who were very hostile antagonistic to India. It also arose from the desire to search for a national identity and displace what was widely perceived to be the colonial mind set. One of the progenitors of this school was Bankim Chandra Chatterjee.

The Indian nationalist school of historiography, on the other hand, was accused of being over-reactionary, and as a result of its innumerable flaws which also included methodological ones, had never made much headway in forging a broad consensus among a wide range of scholars. In addition, R.C. Majumdar and other Nationalist historians were often accused of Hindu nationalism and communalism. They were also accused of trying to glorify India's past and lacking objectivity, consistency of method and rigour. It was also accused of being casteist, and lacking a subaltern

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perspective. Some scholars belonging to the nationalist school have also contributed to pseudo-scientific pursuits, at times supporting the indigenous Aryan theory and other nationalist constructs. However, nationalist historiography has greatly contributed to the study of India's cultural history. It has also contributed to the study of regional cultures.¹⁰

Hindutva interpretations of history

The Hindutva frenzy began sometime in the 1990's possibly as a reaction against outdated colonial constructs. While a few Hindutva efforts may have been well-meaning, many Hindutva 'scholars' were associated with fringe elements like the RSS. Most scholars believe that many Hindutva approaches cannot hold up to any kind of a rigorous scholarly scrutiny, and most would not qualify as bona fide approaches at all, being largely driven by ideological constraints such as the Hindutva desire to maintain that 'Aryans' were natives of India or to prove that the Vedic culture was older than the IVC, and is known for its casuistry and sophistry as well. Among their more publicized and now well-known strategies is a perverse criticism of a long-abandoned theory known as the 'Aryan Invasion theory' with a view to replace them with ideology-driven constructs such as the 'Vedic Indus theory', 'Indigenous Aryan theory', or in some cases even the 'Out of India theory'. Although many colonial constructs are still in use well into the twenty-first century, Hindutva approaches, unlike those of the Indian nationalist school, may not be just reactionary or ill-conceived; they may, in certain cases, be even full of dubious and convoluted logic and paralogisms used to push a certain point of view even if it has little mainstream or intellectual backing. Hindutva approaches can also be identified through their polemical constructs and their minatory posturing, and Hindutva forces had nearly managed to wrest control of key institutions in India in the early 2000's. The author has discussed Hindutva strategies in great detail in his papers on the 'Aryan problem' published by the ICFAI University press, and anyone who reads those papers will be convinced that they are just hogwash and baloney, and anything but valid scientific approaches meritorious of serious consideration. Any twenty-first century approaches to historiography will need to take into account the importance of countering such ideologically-driven approaches and interpretations of history which may well devour the field if not checked in time.^{17 18 19}

Post-colonialist historiography in India

Post-colonial historiography emerged as a reaction towards the colonial world-view and sought to emphasize a multi-polar world as opposed to a euro-centric standpoint, and rescue objectivity from the debilitating effects of colonialism. However, this school has been criticized for its lack of historical method and its association with nationalist movements in some countries. The leading postcolonial theorists are Frantz Fanon, Edward Said, Gayatri Spivak, Homi Bhabha, and Leela Gandhi.

Subaltern historiography in India

Subaltern historiography emerged in India in the 1980's as a distinct discipline of study. Vivek Chibber and Vinay Lal have been key proponents of Subaltern studies. The key tenet of Subaltern history is to look at history from the point of view of the underprivileged and the downtrodden. Vivek Chibber has also been associated with the 'New left' which is trying to make Marxist historiography more relevant for the times.

Post-modernist Historiography in India

¹⁷ Mill, James (1817), *The History of British India* (1 ed.), London: Baldwin, Cradock, and Joy 10 D. Gaur, *Essays in History and Historiography*, Anmol Publications, New Delhi, 1995

¹⁸ *Syncretism and Acculturation in Ancient India: A new Nine Phase Acculturation Model explaining the process of transfer of power from the Harappans to the Indo-Aryans Part One* Sujay Rao Mandavilli, ICFAI Journal of History and Culture, 2009

¹⁹ *Syncretism and Acculturation in Ancient India: A new Nine Phase Acculturation Model explaining the process of transfer of power from the Harappans to the Indo-Aryans Part Two* Sujay Rao Mandavilli, ICFAI Journal of History and Culture, 2010

Post-modernist historiography is still in a nascent stage in India. Post-modernism emphasizes a greater or enhanced role of a historian towards society by emphasizing a humanistic outlook. It also encourages a search for new topics for analysis, and encourages a sceptical outlook. Post-modernist historiography has been criticized for its vagueness of approach, and its inability to offer tangible leanings to other disciplines of study. Notable critics of post-modernism have included Alan Sokal, and most Marxist scholars.

Historiography by Objectives or HBO

Historiography by Objectives or HBO was a new approach towards Historiography proposed in the paper "Historiography by Objectives: A new approach for the study of history within the framework of the proposed Twenty-first Century school of Historiography". This approach originated from the tools and techniques employed by the Author in his research publications dealing with the Aryan Problem, the Identity of the Harappans, the Indus script and literacy in Post-Harappan India.

Historiography before and in the nineteenth largely century dealt with biographies, historical narratives, the rise and fall of rulers or governments, and the stories of great men. However, the twentieth century saw a gradual and a very perceptible shift towards social and economic history, and history driven by economic and social considerations, as a result of Marxist and other approaches.

Likewise, it is likely that the twenty-first century will witness a shift towards integrated and multi-disciplinary approaches and would not only encompass cultural studies, but will reach out to other sciences such as anthropology, genetics and linguistics as well, and would play a key role in the progress of these sciences, such that the efficacy of a historian in shaping the growth of allied sciences must become a key metric, and the *raison d'être* of a historian. It would also cement and solidify historiography as a science, and greatly enhance its value.

We argued that the distinction between arts and sciences would become blurred and would eventually vanish, except in situations where history cannot be normally considered to be a science. There would be a more international outlook albeit with a local flavour under specific circumstances. The boundaries between various periods in history, and history across regions would become blurred. A key objective of any 21st century school must be to increase levels of education and awareness in general among the masses and the historian can play a crucial role in combating superstition, dogma and blind faith by promoting a scientific view of history.

We had argued that stakeholders were central to the process of history-writing and would play a major role in determining the direction of historiography along with scholar-defined objectives and pre-defined or standard objectives proposed in the paper. Needless to say, a stakeholder-focussed and a stakeholder-driven approach will be an inalienable part of all Twenty-First century approaches, and would constitute one of the core principles enunciated in this paper.

Standard objectives

The standard objectives that were proposed as a part of 'Historiography by Objectives' are presented below. Some of these objectives can, as observed, be used to generate more scholar-defined objectives, as should be obvious to the reader. This list is also very obviously indicative and not exhaustive:

1. The first sacred duty of a historian would be to swear allegiance to the truth at all times: intellectual honesty and objectivity are of paramount importance in any endeavour, and would be the cornerstone of any historian's approach. Interpretations of history including creative ones would be permissible, but these would not be at the expense of society and science.
2. The historian must strive towards accuracy and precision, as accuracy and precision can go a long way in serving the cause of science. However, accuracy and precision must only be followed to the extent practicable, and to the extent existing data will permit.
3. The historian must Insist on hard or irrefutable evidence and data wherever possible, to back up all his findings. In certain cases, however, a compromise is in the best interests of scholarship particularly if key or otherwise useful and potentially-correct information has to be omitted due to want of irrefutable

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data, and if scholarship is likely to suffer as a result. In such a case, qualifiers may be added. The approach in this paper promotes empiricism over Historical Materialism. An example of this is the omission of data on Post-Harappan India given the fact that narratives pertaining to this period in Indian history may not be wholly accurate.

4. The historian must work towards the greater good of society, and act in the interests of science and strive towards the enhancement of scientific knowledge. This will be one of the key objectives of any scholar, and any scholar would be advised to take this seriously. This may be referred to the scholar's social responsibility and he must never waver from this principle and adhere to it steadfastly at all times come rain or shine. An example of this is that a critique of other scholars' research must be done responsibly and constructively keeping in mind the greater interests of society, and not as far as possible based on his own biases or prejudices. Social responsibility is another key principle of this approach. It may be reiterated here, that many specialists such as anthropologists have already proposed and have been adhering to professional codes of conduct, and it is time for others, to follow suit.

5. The historian must always keep stakeholder interests in mind and work towards furthering stakeholder interests.

6. The historian must work towards a stakeholder-friendly approach to history-writing, and stakeholders may vary on a case to case basis.

7. The historian must enable and facilitate a synthesis with various fields of science, and to follow a multi-disciplinary approach wherever possible: This should be one of the core objectives of a 21st century historian. Inter-disciplinary approaches or IDA's, are a key part of this paper. To quote H.C.Darby, "History is the central social science, of which all others must feed. It is the basis of social sciences just as mathematics is to natural sciences."

8. The historian must proactively work towards solving unresolved issues in science and history and to facilitate an environment where vexatious problems in science and history can be solved. Wherever there are a large number of unresolved issues, it would be necessary to identify the importance of the resolution of such issues to the advancement of science, and by adopting techniques such as an Opportunity Loss Approach or OLA and Social Benefit Analysis or SBA so that a prioritization is possible.

9. The historian must strive towards evidence-based and objective revisionism and only where revision becomes necessary, and to denounce and combat ideology-driven revisionism and revisionism driven by vested interests.

10. The historian must work towards elimination of narrow parochial interests and vested interests in scholarship. The historian must strive to create a spirit of bonhomie and camaraderie in the field research and foster better understanding between various groups. The historian must guard against intellectual elitism and work towards the democratization of science and the dissemination of knowledge. Making public the data, the methodology used in research, and the key arguments, as far as possible is also a very good idea.

11. The historian must also work towards the creation of a peer-review mechanism in the field of historiography by forging healthy partnerships with other scholars. It is also necessary that peer review be done as early as possible to mitigate the ill-effects of shoddy scholarship. As a thumb-rule, a faulty piece of work should not normally fall into the hands of a party who is not equipped to, or does not in the normal course of events, review or critique such work. As a metric, QEPIS or Quantification of the effects of poor or Ideologically-driven scholarship (i.e. Downstream and adverse effects of poor, ideologically-driven scholarship or the continued persistence of antiquated approaches) may be calculated from time to time including its bearing on other sciences and on society. This is one of the key requirements of this approach, and may become an area of study in itself.

12. The historian must work, in the longer-term towards the formalization and improvement of processes which can be adopted for various aspects of scholarship; this would encompass various activities from the time, new evidence is discovered, a new topic is taken up for research, or a new hypothesis is

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formulated, review and examination of hypothesis, debate and dialogue until incorporation in textbooks, including crucial checks and balances to be followed before material enters the student's presentation layer. This may be referred to as the lifecycle approach. This may be infeasible in the short-term, as scholars of many ideological dispensations may be involved, such as religious fanatics and Marxists, for example, as in the case of India, rendering progress of any kind *prima facie* impossible. This can therefore best be seen as a long-term goal.

13. The historian must constantly work towards the identification of pseudo-scientific approaches and approaches inimical to the advancement of science and scholarship throughout the lifecycle. To critique, without resorting to *ad hominem* attacks, pseudo-scholarship of all kinds and to work towards the quantification of bias, prejudice, and pseudo-scientific approaches at all stages in the lifecycle, and in the greater interests of society i.e. Analysis of Pseudo-scientific approaches (APSA) (This is different from QEPIS) by following standard principles of epistemology and a study of scholar behaviour. This will need to be applied to all areas of scholarly activity such as research and peer review, and may become a major field of study in itself.

14. The historian must acquire competence in all allied areas, and to be up-to-date with all developments in all related fields of science.

15. The historian must create a framework where specialists such as anthropologists, linguists, comparative historians and other scholars can carry out their research.

16. The historian must work towards a situation where the distinction between various fields of science gets blurred.

17. The historian must consider history as a science as work towards bridging the gap between arts and sciences in such a way that the distinction between arts and sciences is bridged to the extent possible.

18. The historian must work towards the creation of a seamless framework so that history across regions can be studied.

19. The historian must work towards the creation of a seamless framework so that history across periods can be studied.

20. Globalized approach: All problems and solutions must be re-examined from an international background to ensure scholarship is global in nature.

21. The historian must combat alternative historiographies by rendering them meaningless in the long run.

22. The historians must constantly pursue new vistas and opportunities in history writing by constantly looking out for new vistas in historiography.

23. The historian must guard against dogma by constantly engaging in a process of self-introspection.

24. The historian must analyse, any new data or evidence without undue delay and use it to review and reformulate hypotheses as applicable.

25. The historian must never discard contradictory data that does not fit into a hypothesis. Contradictory data or evidence, on the other hand, must be welcomed, and carefully scrutinized and analysed, and a synthesis will always lead to a better solution. The scholar must also guard against simplistic solutions or solutions that do not work in the real world.

26. The historian must guard against vindictive approaches and take what is useful from other ideology-driven approaches. For e.g. Subaltern history from Marxist historiography may be an extremely useful topic that can be pursued well into the Twenty-first century.

27. The criticism and elimination of restrictive approaches in other ideologies e.g. Historical Materialism to the extent it impedes science or scholarship will also be an essential concomitant of this approach given the fact that it impedes scholarship and science in the longer-term.

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28. The historian must desist from forming any pre-conceived notions about the causes and effects of events i.e. thus he must refute determinism and teleology, and any restrictive notions of a covering law, and acknowledge the fact that this is one of the key differences between history and the sciences as events are often shaped by the free will of actors. This is in turn shaped by cultural and economic conditions, and also the quality of the education system and government policy, among other things.

29. The historian must look for avenues where he can impact society positively as a historian and play a role in shaping the future in collaboration with other scholars: For example, an interesting variation of DPPF techniques is to generate a list of problems in a given region or worldwide, and then use techniques in historiography to study past events and actions and approaches used in the past, including Deep Historical Analyses (DHA). These can then be used to provide solutions for the future. Thus, the historian can begin to play a role in shaping the future. Areas of study can include the history of drug and substance abuse, population control, female infanticide, an analysis of historical data in learning abilities in deprived children etc.

30. The historian must understand the realities of a multi-polar world and desist from adopting Euro-centric or other region-centric approach in a way that would affect his judgment or impartiality. Understanding issues from the points of view of different cultures would help a scholar broaden his horizons and act in the greater interests of scholarship. It is recommended that all research teams be multicultural as far as practicable, and such teams must not only include specialists from various fields, but also some non-specialists as well.

31. The historian must adopt and pursue a critical analysis of religion and constantly re-examine the role of religion in society; to work towards purging unhealthy aspects of religion using a critical analysis approach, and by acknowledging that fact that not all religions are the same. Criticism of ideology-driven discrimination between religions must be discouraged, and an evaluation and criticism of all ideology-driven approaches to historiography is encouraged, and the standard principles of epistemology must be followed to prove whether they are bona fide or not. The scholar may also contribute towards analysing and critiquing, in conjunction with other specialists in the respective fields, so-called sciences such as astrology, palmistry, Vedic mathematics, and contribute his perspective with a view to fighting pseudo-science.

32. The historian must constantly analyse all pseudo-historical claims made from time to time such as the existence of Lemuria, the existence of Atlantis, claims of a heavier-than-air flight by Shivkar Bapuji Talpade in India in 1895, expose fraudulent claims wherever applicable and spread scientific awareness among the masses. To help a scholar achieve this, it was proposed an approach 'Formal Evaluation of Prerequisites and Implications of claims' (FEPIC), where all the implications of a claim, and bearings on all other fields of study, along with a study of pre-requisites such a claim would entail, and its violation of known laws and principles are formally listed out in collaboration with other scholars, so that fraudulent claims can easily be identified and eliminated. A discussion of evidence for and against the claim may also be presented, and used in conjunction with other approaches proposed.

33. The historian must focus on the history of science both within a specific region, and across the world by focussing on the history of physics, chemistry, mathematics, writing systems and metallurgy to name a few, and to use such studies to draw inferences and directly and indirectly enhance scientific output. It is expected this would be a major area of study, and regrettably, this has been ignored largely in past approaches.

34. The historian must participate in new areas of study such as Cliometrics which can greatly help in economic development of nations and reduce poverty and work towards bridging the gap between history and economics, and work towards combining such approaches with DPPF and other techniques.

35. The historian must keep religious fanatics in check by facilitating higher standards in education. To constantly look for innovative ways to eradicate blind faith and superstition and fight pseudo-science by promoting scientific versions of history. To help combat superstition and blind faith by promoting scientific versions of history.

36. The historian must adopt localized and region-specific approaches wherever required. For example, historians can work towards better national integration and communal harmony within a region by

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eliminating common misconceptions, or highlighting common or shared elements of culture, or work towards better frameworks in cultural studies. This would be a legitimate and a very noble objective of a historian, provided he does not succumb to ahistorical or pseudo-scientific approaches, or waver from the truth.

37. The historian must constantly identify new research methods and new research techniques that can be of use to other historians and to take pride in his or her avant-gardism. The historian must work towards a transition from a scenario where pre-defined historical methods are followed, towards a situation where a scholar is free to define his own methods (SDM's or scholar-defined methodologies), provided they do not contradict standard scientific epistemology. Thus, the scholar's focus has to be to define and formulate a robust methodology against which historical methods can be evaluated. This would necessitate a paradigm shift in thinking, and may be much more complex than meets the eye. It may however be argued, that this would be the only way forward in the era of multi-disciplinary approaches, and can potentially lead to an explosion in knowledge. While this approach may be fraught with dangers, it may even be necessary if greater progress is to be made in the longer run, and the risks involved in an approach can be quantified and addressed either the scholar himself or by his peers in a spirit of camaraderie. If the researcher is uncertain of his approach, however, he may seek help or err on the side of conservatism by keeping such approaches in abeyance until further scrutiny by a larger body of scholars and historians, and take recourse to other more conservative and more tried and tested approaches. Target audiences cannot normally be made scapegoats; if the work under consideration is a purely research-oriented publication, appropriate qualifiers may be added. Another principle to be borne in mind is that under no circumstances will a scholar restrict himself to a single approach, particularly those propounded or delineated by other scholars, especially if there is reason to believe that the approach is inadequate or insufficient, or has any known weaknesses. This is one of the key principles of this approach and would help pre-empt fossilized or dogma-driven approaches. This would bring in an added dynamism to the field of historiography and positively impact various fields of science in the long run.

38. The historian must constantly identify new objectives that can make history writing more purposeful, and seek new vistas in historiography. To prioritize objectives using Opportunity Loss approaches (OLA) (Which would seek to identify losses arising from a particular area of study) and Social Benefit Analysis (SBA) (Analysing the benefits of the study of a given topic from the point of view of society). In many cases, underlying problems faced by stakeholders and discovery of new evidence could also act as triggers. The former would seek to minimize the Opportunity loss while prioritizing topics for research while the latter would seek to maximize Social benefit.

39. The historian must play a key role in conservation and preservation of historical sites in collaboration with scholars in other fields such as archaeologists by helping create awareness and through an assessment and evaluation of such sites from a historical and cultural perspective.

Towards a Twenty-first Century school or schools of Historiography

Without making too much of a fuss or an ado, we introduce the core principles of historiography as derived from the above objectives. The lacunae of all existing approaches would then become apparent to readers, and this would obviate the need for a verbose preamble. This will also automatically explain the intent and rationale behind proposing the Twenty-first century as a distinct school of thought, and also serve as its validation and justification. We of course proactively invite as much constructive criticism from as wide an audience as possible, and this would be in the truest spirit of dialectical approaches.

The objectives stated above will automatically translate into a core set of principles that should function admirably in all but the most extreme and the rarest situations. Thus, these principles are characterized by their universality. Needless to say, principles can be added by other scholars, although such a situation may be warranted only very rarely. Objectives will also be added more readily and frequently than principles.

At the end of this paper, readers will be able to evaluate existing approaches on a scale of 0 to 5 or 0 to 10. How would Hindutvaवादins fare? How would Euro-Centrists fare? How would Marxist historians

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fare? Users may be able to draw prima facie conclusions very, very easily, though more rigorous assessments may be reserved for a later date.

We believe the core principles of the Twenty-first century historiography as derived from the afore-stated objectives should be the following:

Principle # 1 To champion the idea of Historiography as a science and further objectivity in scholarship

The idea that history is a science is over a century old. In 1903, J. B. Bury, Professor of History at Cambridge University, famously declared at an inaugural lecture Inaugural lecture as Regius Professor of Modern History, "History is a science, no less, no more." On the other hand, the German historian Leopold Von Ranke had declared in the Nineteenth Century "The business of history is not to judge the past or instruct the present for the benefit of the future. Its benefit is only to show what exactly happened."

Scholars who claim that history should be considered a science have advanced many claims in support of their stand. Firstly, historiography, when properly applied, can become a potent tool for predicting the future as only a historian would have a comprehensive overview of different events in the past along with a detailed analysis. Secondly, the goal of historiography is the establishment of the truth under any circumstance, and this tallies perfectly with the goal of science. Thirdly historiography emphasises the creation of principles which can be broadly used in any situation. This is true of science, too. Fourthly science depends on observation and experimentation, and historiography too, adopts this to a lesser degree. Fifthly, the historian is expected to be subjective only in a limited fashion. His output is expected to be controlled, keeping in mind the needs of society. Sixthly, the historian is expected to guide scholars in various other allied fields, and the progress in those fields depends to a large degree on the scholar in question.

We therefore strongly recommend that history be considered as a science, and for those who beg to differ, the idea of 'strong principles' versus 'weak principles' as mooted in the section on Neo-centrism may prove to be some sort of a revelation. Scholars such as Prof E.H. Carr, Vico, Collingwood, Comte, Spengler and J.B.Bury have also supported the view that history is a science. The Annales School has also sought to incorporate scientific methods into historiography.

In order for Historiography to be considered to be a science, Historians must follow scientific method as far as possible. This includes using intuition and best judgment approaches, formulating hypothesis, gathering data, making observations, accepting, modifying, refining or rejecting hypotheses etc. Historians are also expected to be familiar with the science of epistemology i.e. what constitutes true knowledge etc.^{20 21} One of the core corollaries of this approach would be adherence to objectivity, and this may have been something that ideology-driven scholars lacked. Objectivity could stem from following a scientific method rigorously, and this would include the formulation of a hypothesis, gathering data for and against it, testing it rigorously etc, with as few deviations as possible.²²

However, the standard scientific method may be modified for the field of historiography, and this is something historians must formulate.

Principle # 2 Emphasize the formulation and enforcement of generic principles over static methods (focus on principles such the scholars can define their own SDM's)

²⁰ The Principles of Science: A Treatise on Logic and Scientific Method: William Stanley Jevons Macmillan 1874

²¹ Epistemology: An introduction to the theory of knowledge Nicholas Rescher State University of New York 2003

²² History, Its Theory and Method B. Sheikh Ali Macmillan Publishers India Limited, 1981

Principles may be defined as core axioms, rules, values or beliefs that constitute an entity or a field of study, and serve as a yardstick and a determinant for all its activities. Principles are much more fundamental to a field of study than policy, and typically reside at its core, thereby setting and dictating its long-term goals and direction as well. Principles serve as a foundation for that entity, and are meant to determine and govern methods and policy too. Principles typically have universal currency in the entity and related entities across time and space. Principles must typically be made as comprehensive and wide-ranging as possible such that all risks arising from various sources are mitigated and flaws redeemed. Principles must ideally be never revised (readers may read this sentence with an emphasis on the word 'ideally'), modified in any manner, or negated as that would constitute a conceptual defect or a lack of understanding: we can recommend this only where absolutely necessary, and potentially as a damage control exercise. While additions and modifications to principles are encouraged, they would usually be made very rarely in practice and would connote a course correction, an innovation or a paradigm shift.

A method on the other hand, may be defined as either a procedure or an approach for executing or achieving a task or a set of actions in a systematic and a controlled fashion. Principles can be added and refined albeit relatively more rarely, but methods can best be left to trained and competent scholars (SDM's or Scholar-defined methodologies). This need not however always be the case, and in addition to libraries of principles, libraries of methods will always be available for the scholar to refer to or fall back upon.

A procedure or process is subservient to a method. It may be defined as a structured and a formal plan to achieve a goal in accordance with pre-defined principles. Procedures would ideally be best left to the scholar's capabilities and discretion.

Methods for identifying principles

The following are the methods we identify for identifying and revising principles:

1. Understand the mission and objectives of the historian in question and the objectives of a historian in general.
2. Identify the core values of the historian in question and of historians in general.
3. Understand the defining characteristics of science in general and inheriting them, as applicable.
4. Understand the mission and objectives of scholars in allied fields or dependant sub-fields and extending them as appropriate
5. Analyse the methods of the scholar in question or other scholars to assess whether these can be formulated into general principles
6. Analyse the processes and procedures of the scholar in question or other scholars to assess whether these can be formulated into general principles
7. To obtain views from all stakeholders the scholar interacts with or stakeholders and third parties who are impacted by, or depend on his work.
8. To formulate principles by avoiding present-centric views and formulating long-term views.

Thus, this approach attempts to proceed truly beyond laundry lists and rubrics, and leave methodologies and procedures to competent scholars while focussing only the general direction of scholarship. This is what historians as a group should focus on in letter and in spirit, while leaving more prosaic and banal aspects and specialized topics to individual scholars.

Principle # 3 Neo-Centrism (or Centrism) as a philosophy and Neo-Centrism as a path to objectivity

We will also introduce the concept of 'Neo-Centrism' (or simply, Centrism) in this paper. 'Neo-Centrism' may be defined as a neutral and an ideology-free approach to all issues pertaining to a study of historiography, culture and various other fields, (This is almost no holds-barred approach with potential widespread applicability) and an alternative and an "in-between approach" to the approaches espoused by the left and the right in specific circumstances.

Oddly enough, the term Neo-Centrism already exists and refers to a political ideology advocated by the Neo-Centrist International (NCI)²³ and other organizations, particularly in the field of politics and foreign policy. This approach may also draw on other ontological approaches if required as other scholars extend the concepts proposed here.

From our perspective, Neo-Centrism has a slightly different albeit a much broader connotation, and in our definition, the key characteristics of Neo-Centrism are below:

Neo-Centrism proposes a rejection of right-wing, left-wing and other ideologically-driven interpretations of history to the extent they are anti-truth and anti-science. It may be noted at the very outset, that the ideas of 'left' and 'right' are wholly foreign and irrelevant to this approach, and these two concepts are used only to what would like to call 'span the pontoon', or cross temporary hurdles and purge them immediately thereafter. Neo-Centrism from this perspective is primarily based on a reconciliation and elimination of paradoxes in any form, the identification of which will be at the heart of the success of this approach. Neo-Centrism can be extended and applied to Economic thought, Political philosophy, applied linguistics, religious studies, debates relating to theism vs atheism, historiography, research methodology and process improvement, even though most topics may be outside the purview of the present paper.

Neo-Centrism may well become one of the biggest and most respected movements of the Twenty-first century. While some work has already been done on Neo-Centrism or similar concepts by other scholars in some form or the other, we invite other scholars to apply Neo-Centrist approaches to their respective fields so that it may become one the most important and influential movements of the Twenty-First Century. Neo-Centrism is primarily based on dialectical approaches, some of which have existed for aeons, but extends them in various directions and melds them with pristine ideas and concepts— Neo-Centrist approaches therefore actively seek and reconcile divergent viewpoints by involving or taking into account the views of as many researchers as possible from diverse backgrounds and with divergent viewpoints.

As a crude but very effective rule of thumb, Neo-Centrism if well-conceived and applied, leads to a reconciliation and a merger of viewpoints, while ideologically-driven approaches (such as Hindutva, Marxist and Dravidian nationalist views of history, for example) lead to polarization of views, are anathema from our point of view. This alone should be a fundamental and a vital metric to isolate pseudo-science from bona fide science.

This approach will also eventually lead to, and culminate in establishment of 'Codes of conduct' for historians and scholars of various hues and colours by promoting intellectual honesty and being reproachful to ideology of any kind. In the Indian context, this is likely to be detested and virulently opposed by the right-wing and the left-wing as it would severely undermine their ideologies, but by our own analysis and assessment, truth-based and neo-centrist approaches shall prevail in the long-term by rendering ideologies wholly meaningless and irrelevant.

Thus, these techniques are a vast improvement over older devil's advocacy techniques, and an extension of TRIZ, and other approaches to critical thinking such as Lateral Thinking, the Six Hats technique, among others. They can also complement process improvement techniques such as the Delphi technique, Six Sigma and the Theory of Constraints.

We had proposed some newer approaches such as CRCDE or Continuous reconciliation of Contradictory data or evidence., the key principles of which were (a) contradictory data or evidence must be aggressively sought, and such data or evidence is nothing to be afraid of (b) if contradictory data or evidence exists, the model or approach is over simplified (c) Reconciliation of contradictory data will always move us to a higher state of understanding (d) if contradictory data is left out from an analysis, a justification may be required.

Contradictory viewpoints may however be left out, if not backed up by data, or if the methodology used by the other historian has been convincingly or comprehensively refuted by the historian in question.

²³ <http://www.theamericanconservative.com/larison/neocentrism-another-name-for-the-failed-bipartisan-consensus-on-foreign-policy>

This is necessary to grab the bull by the horns, avoid inertia and lethargy, and side step what we may call 'The Inconvenient truth syndrome'.

In case of Reflective Equilibrium through role-swapping (RERS), another idea that was mooted, the scholar learns to put himself in the shoes of all other stakeholders who would benefit from the work or be impacted by it, and does this one stakeholder at a time. He then tries to look at issues from the other party's point of view, or evaluate how he would react to it using that party's known ideological affiliations, dispensation, antecedents or other relevant information as a base. He documents his observations and then modifies his work accordingly, or generates new objectives.

A key advantage of this approach would be that it would save time, effort and energy, and works in a field such as historiography where the other party may be unavailable or dead, and could be used in conjunction with other approaches to boot. These approaches can be adopted in addition to other dialectical approaches such as those which were propounded by Hegel and reinterpreted by Marx, and other approaches such as Rawls's reflective equilibrium, standard Devil's advocacy & Brainstorming techniques etc, and dialectical approaches which have been used in some form from the days of Plato and Aristotle.

Application to various fields of study exact and inexact disciplines

The branches of sciences can roughly be divided into two categories: Exact Sciences and Non-Exact or Inexact Sciences. Exact sciences would include physics, chemistry, biology, etc. while the Non-exact sciences would include history, sociology and most other disciplines forming a part of what may be defined as humanities. In the exact sciences, one can pinpoint solutions with a great degree of precision, whereas in the non-exact sciences one cannot insist on a similar degree of precision.

In the case of inexact sciences each approach may consist of pros and cons, and decision-making typically involves some amount of judgment. In case of inexact sciences, a solution can typically never be proven. Neo-Centrism is also integrated with Relativism. Relativism is a concept which states that points of view have no absolute truth or validity when studied in isolation, but must be evaluated and studied as a part of a larger ecosystem. Neo-Centrism is also related to eternalism, whose definition does not tally entirely with these requirements. We therefore define the term 'aeternitism' derived from the Latin term 'aeternitas' meaning permanence. The term presently exists to describe an obscure spiritual practice. (There was also a Roman God of the same name that was associated with timelessness). Aeternitism, by our definition is the applicability and enforcement of a certain principle or a set of principles across the vagaries of time. The term 'vagaries' cannot be stressed enough, as predictions are typically fraught with uncertainties, and one typically only progresses towards reliability gradually and in steps. We also propose the term 'Omnimodism' to be the applicability of a certain principle or a set of principles across space and time, and under all circumstances and situations under the sky. This is derived from the Latin term 'Omnimodous' meaning timelessness and is similar to the uncommon English word 'Omnimodous'. The following are the steps that proposed:

1. Neo-Centrism is essentially based on dialectical approaches. Dialectical approaches are effectively based on age-old techniques of reconciliation of opposing and contradictory ideas in a single-minded and an unwavering quest for the truth. From this perspective, if a scholar does not apply dialectical approaches, his work is likely to be flawed, incomplete and biased in all except a specific set of conditions or the narrowest circumstances. Therefore, Neo-Centrism requires abandoning narrow and constricted thought and taking into consideration, other people's perspectives and points of view. (Refer 'Frog in the well analogy'). Our approach also recommends an aggressive pursuit of contradictory data or evidence as this would greatly facilitate scientific progress. As a matter of fact, collection of contradictory data may even become mandatory in the process of hypothesis building in the longer-term as it is only this approach that can take us closer to the truth. This is an ideal all interested parties should strive towards, but this would require an overall change in mind set from all sides, and such a scenario may only be possible if several other requirements are met.

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2. From our perspective, if there is a valid criticism of a scholar's work that can be proved using the principles herein, or if it can be proven by using other valid epistemology, it means that the scholar's work is flawed or incomplete, and requires appropriate revision to make it acceptable.
3. If an issue is resolved using dialectical approaches, it automatically moves us to the 'next higher state' and closer to what one may refer to as the 'Ideal state' definitions of which have been proposed from very ancient times by scholars such as Plato and Aristotle. (Kindly refer definitions 1 and 2). In our definition, an ideal state is one where there are absolutely no paradoxes of any kind. However, there can be exceptions to this rule, and resolution to paradoxes may not always lead to an ideal or an enhanced state from the long-term perspective: please refer to other points in this section.
4. The 'next higher state' typically, and with a few very isolated exceptions, leads to an enhancement of knowledge and scientific output in the long-term, and can potentially increase the well-being of society as well.
5. Moving to the 'next highest state' automatically enhances the visibility of the next set of issues or problems by removing bottlenecks. The next set of issues may not be typically visible until the first set of problems is removed. This is akin to a man climbing a mountain. The next peak may not be visible until the first peak is scaled. Thus, this approach engenders and facilitates progress by proactively surmounting problems and removing bottlenecks.
6. While adopting dialectical approaches, differing viewpoints need to be reconciled. If any exclusions are made, a proper justification needs to be provided (Template 1: 'Dialectical Approaches: Justification of exclusions'). This ideally needs to be mandatory. While adopting dialectical approaches, the other practitioner's line of defence may also need to be formally obtained and evaluated for its completeness and validity. This will naturally be a pre-requisite for the task, and must be carried out in true letter and spirit. One way to do this would be to identify stakeholders who are most negatively impacted by an approach or a method.
7. Core axioms may be embossed in a belief system, and may be defined as the building blocks of a belief system. Core axioms from our perspective are defined as principles. A belief system from our perspective is defined as an entity.
8. Thus, an entity comprises one or more principles. This is therefore a one to one or a one to many relationships.
9. This exercise can also be carried out by assuming a one to one relationship between a principle and an entity. In other words, an entity or a belief system has only one principle.
10. If there are contradictions within an entity, the entity is defined as flawed, and lacking completeness.
11. If there are contradictions within an entity, these need to be identified using a 'Table of Contradictions'. (Template 2: 'Table of Contradictions')
12. If there are any contradictions within an entity, the entity may need to be broken up into two or more parts for a more meaningful analysis. Thus, a proper identification of an entity and its attendant principles is essential for the success of this approach.
13. An entity may be flawed for many reasons. An entity may typically be said to be flawed if too many deep-rooted paradoxes or contradictions persist. This can be analysed by carrying out a Root Cause Analysis. (Template 2: 'Table of Contradictions')
14. The impact of one more contradictions on various fields of study and society as a whole will need to be assessed and will be useful for determining the triage. (Template 2: Table of Contradictions) Additional data may be sought to probe the root cause of the actions of progenitors. E.g. Ideological bias, lack of knowledge, general incompetence, lack of scientific method. This would be documented as necessary (Template 1: 'Dialectical approaches: Justification of exclusions')
15. Pseudo-scientific approaches must be rigorously analysed and a heuristic approach (Template 3: Analysis of Pseudo-scientific approaches or APSA) (Template 4: QEPIS or Quantification of the effects of poor or Ideologically-driven scholarship (i.e. Downstream and adverse effects of poor, ideologically-driven scholarship or the continued persistence of antiquated approaches)
16. Entities may be ordered into a chain of entities.
17. Relationship between entities may be categorized into the following (a) Fully nested (b) Overlapping. (c) Related- Temporally-related (d) Related- Spatially related (e) Related- Functionally related (Template 5: 'Entity-relationship diagram or static Venn diagram')
18. Principles may thus be inherited from other entities in either original or modified form.

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19. In a chain of entities, if or more principles contradict each other, the principles that are tied to a more robust methodology and have a wider currency must be preferred.
20. Assessment of assumptions and implications of principles must also be carried out. (Template 6: 'In-depth assessment of Principles, assumptions and implications'). This can also be extended to all statement or utterances. For example, the statement 'a script cannot be logo-syllabic because the length of is inscriptions is short' has many serious errors, and these must be identified formally by trying to establish its founding principles, assessing the implications and assumptions of such a statement, and in most cases, this will lead to comic and hilarious end-results, often exposing the author in question, his attitudes and whims, and calling for a radical reassessment.
21. In the above table, assumptions must be assessed for their validity using Occam's Razor. If assumptions are invalid or untestable, the principles are either invalid or weak.
22. In the above table, implications must be assessed. If any of the implications are untrue, the principle is either untrue or over-generalized.
23. A 'Universality Scale' or a scale for ranking of principles can be prepared by assessing principles on the basis of their (a) Universality and relevance on a time scale (b) Geographical applicability or spatial spread (c) Overall long-term positive implications for science and benefit for society as a whole. (d) Their conformity with natural laws (e) Their conformity with human nature. (f) Conformity with principles associated disciplines. The 'Table of contradictions' can be used to document inconsistencies and contradictions. This can also be put to productive use to plan the future.
24. The 'Universality Scale' can be extended to entities also, even in the many to one model.
25. If in an entity, some principles are strong or tend to override principles associated with other entities, and some principles are weak or tend to be overridden by principles associated with other entities, consider breaking up the entity into two or more parts.
26. In a chain of entities, if principles associated with two entities contradict each other, this scenario is unsustainable in the longer term. This is called a Paradox.
27. In case of a paradox, the set of principles with the maximum allure may dominate temporality.
28. In case of a paradox, principles going against human nature will not prevail in the longer term.
29. In case of a paradox, principles going against the laws of nature will not prevail in the longer term.
30. In case of a paradox, principles associated with a more robust epistemology will prevail in the longer term
31. It is the duty of the 'aeternitist' and 'onmimodist' to identify principles which will have currency across space and time. It is also the duty of the 'aeternitist' and the 'omnimodist' to identify pre-conditions and exceptions as well.
32. Thus, elimination of a paradox may move us to the next higher state, but it may not always be the ideal solution in the longer term.
33. In case of a paradox, feedback is provided to the subservient set of principles or those lower in the 'Universality scale' such that they may be modified or destroyed or rendered wholly or partly irrelevant.
34. Latency: The feedback i.e. typically adverse, may be immediate or delayed, but the feedback will happen. In other words, the latency time can never be infinity. (Template 7: Latency Matrix)
35. The latency time may be determined by several factors, and may vary on a case to case basis.
36. The latency time can be delayed or postponed though human intervention, but consequences of a paradox can never be avoided unless the paradox itself is eliminated. This is known as the 'Theoretical result' or the expected result. The theoretical result may vary from the actual result. However, the probability that the theoretical result is the actual result is very, very high. In the longer term, the theoretical result and the actual result tend towards each other.
37. Paradoxes must be the springboard to innovative and creative thinking.
38. This approach can be used for both exact and inexact sciences (and for more abstract ideas) with suitable modifications. An inexact science is one where no definite solutions are possible and where different solutions will have both positive and negative implications at the same time. In such a situation (a) A maximum profit, minimum loss approach may be adopted. (b) An formal study of the long-term effects of such an approach must also be carried out. (Template 8: Trade-off Matrix). A related concept that one may like to recall here is Aristotle's Golden Mean. In case various via media solutions are available, all of them need to be evaluated and the best possible solution selected. Therefore, even in the case of inexact sciences, an attempt must be made to resolve paradoxes aggressively, to the extent such a resolution is possible. In all cases, constant

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- introspection is healthy and strongly recommended. In the case of Inexact sciences, approaches may also be evaluated against a specific set of goals which may be arrived at through consensus.
39. Making short-term exceptions: Valid short-term exceptions or digressions can be made due to exigencies or lack of immediate technical solutions.
 40. Reconciling short-term exceptions and long-term approaches: Scholars must show how short-term exceptions will be merged with long-term approaches. This will form a part of DPPF techniques or Dialogue between past, present and future techniques that are described elsewhere in this paper. Note that this may be always possible given the uncertainties pertaining to the future, but some aspects such as identifying contradictions with natural laws and human nature may help.
 41. A trick may be to focus on internal contradictions i.e. contradictions within the entity, if the emphasis is on the short-term and focus on both internal and external contradictions if the focus is on a long-term analysis.
 42. Stakeholder-driven approaches: This approach must ideally involve as many stakeholders and practitioners as possible by initiating an active search for them. Another approach is to look at issues from non-active stakeholders i.e. those who are positively or adversely impacted by an approach.
 43. A structured understanding of the limitations, foibles, weaknesses of the present and present day approaches needs to be carried out. A structured understanding of the tacit assumption and implications of the present and present-day approaches need to be carried out. (Template 9: Analysis of the present and SWOT analysis).
 44. A structured understanding the limitations, foibles, weaknesses of a culture or a geographical context needs to be carried out. A structured understanding of the tacit assumption and implications of a culture or a geographical context need to be carried out. (Template 9: Analysis of the present and SWOT analysis).
 45. Benchmarking will be an integral part of this approach. This will be spatial, temporal and functional. (Template 10: Temporal Analysis)
 46. The definition of an ideal state is an integral part of this approach. In an ideal state, there will be no paradoxes.
 47. This approach will comprise of both a present-state and ideal-state analysis.
 48. A gap analysis between the present and ideal states must be carried out (Template 11: Gap Analysis between present-state and ideal-state.)
 49. A road map may then be prepared to achieve long-term goal (Template 12: Roadmap). This will also demonstrate anticipated changes to entities (Template 13: Entity State-transition diagram)
 50. Solutions may be mined from the past using heuristic techniques (Template 14: DPPF techniques)
 51. Paradoxes also have other implications in terms of impact on other fields of science and human behaviour and these need to be quantified and assessed. (Template 16: Cause and Effect Analysis). Paradoxes are synonymous with weaknesses in the belief system, lead to divisiveness, give rise to conflicts, promote aggressiveness and defensiveness, and throw up counter-reactions of different kinds. If dialectical approaches are not adopted in the long-term, a series of counter-reactions of the "Yo-yo type" can result. This is based on the premise that one-sidedness is against human nature. This is quite unlike a ripple because ripples usually die out. On the other hand, the effect in our model may be much larger than the cause. For example, the Hindutva monster may be a by-product of Colonial and Marxist historiography.
 52. Globalisation and the spread of technology, it may be argued, are willy-nilly pushing humanity towards centrism. This is slowly but surely happening as biased interpretations become fringe and non-mainstream, and gradually get pushed to the wayside and get relegated to the background, ultimately fading into oblivion. There are three ways one can approach this issue (a) Laissez-faire approach where things are left to their own course or destiny without any pro-active human interventions of any kind. The problem with this approach is that the latency time can be very high, and that course corrections can be ruthless and disastrous (b) Proactive approach- unstructured. This can reduce the latency time somewhat but would preclude a comprehensive and an across-the-board solution and may not provide a panacea for all ills. (c) Pro-active approach structured - follows the approaches championed in this paper, or potent alternative approaches.
 53. Paradoxes can be (a) Treated i.e. effectively eliminated (b) Partially treated (c) Deferred is case an immediate solution is either unviable or elusive but marked for treatment as a treatment may be

possible in future or contingent to some other activity (d) Untreated due to considerations of cost and economy or absence of any kind of technical solution.

54. Such approaches must be integrated with valid scientific methodology such as hypothesis-building and the best-in-breed techniques in creative and innovative thinking, examples being Ashtuller's TRIZ and Edward de Bono's Lateral thinking. Our approaches such as RERS or Reflective Equilibrium through Role Swapping and CRCDE or Continuous Reconciliation of Contradictory Data and Evidence.
55. This approach may be modified to include situations where there is no conflict in core and allied principles, but the focus or emphasis alone varies. For examples, some entities emphasize some principles or aspects while playing down others.
56. For this purpose, it will be assumed that all paradoxes have a theoretical solution which may or may not be identifiable at a given point in time. Thus, an active hunt for solutions will emanate from our proposals.
57. Common sense and pragmatic approaches will always need to be followed, and intellectual nerdism must be eschewed at all costs.
58. This approach will also lead to a 'Globalization of Science' and 'Scientific Progress at the speed of light'. The key premise here is pseudo-science and biases germinate due to a combination of avoidable and unavoidable causes. Ideology is a classic case of the former, and personal self-interest being a typical example of the latter. The later can perhaps be only mitigated, while the former can be bypassed entirely.
59. In the utopian neo-centric world, there should ideally be no dissonance as neo-centric approaches move us towards a natural and resolution of paradoxes. However, in the real world, it should ideally not be so. A counterbalance to this type of approach would be an aggressive exploration of contradictory data, evidence and viewpoints through CRCDE.
60. This approach also calls for a reconciliation between short-term goals and objectives and long-term goals and objectives (Template 15: Reconciliation between Short-term goals and objectives and Long-term goals and objectives). One may argue that this needs to be always done formally.
61. One of the core requirements of this approach is 'Objectivity in mindset' which was already discussed in this paper.
62. One may also emphasize pragmatism throughout. In our view, critiques without recommendations for action would be of absolutely no value. Likewise, recommendations for action not followed by action would be of absolutely no value. However, there may be a division of labour, and different activities may be pursued by different parties.

Additional notes:

1. A 'Next higher state' may be defined as a state where the number of paradoxes have been reduced in relation to the previous state, and society has been positively benefitted and moved to a higher state of advancement.
2. An 'ideal state' from our perspective is one where there are no internal paradoxes (i.e. within an entity) and external paradoxes (i.e. across entities) across space and time. It may be defined as a utopia or as near a utopia as deemed possible or practicable in the long term whose goals are not immediately attainable or achievable. The journey to the Ideal state may be represented by goals that are practicable and achievable. This approach is purely representative: One need not even assume that the 'ideal state' will be reached someday. However, this approach comes in very handy because it allows a state that is expected to be reached after an elimination of paradoxes is achieved and a "Theoretical ideal state'. A' Theoretical ideal state is one that is envisaged regardless of the paradoxes at hand or a detailed analysis therefrom. In other words, the 'Theoretical ideal state' is an ideal to benchmark progress against.
3. Templates for various aspects of 'Neo-Centrism' are recommended but not proposed as a part of this paper.

Applications across disciplines

Let us now attempt to understand and evaluate potential applications of this approach across disciplines, and see how our approach can have widespread ramifications and positive implications for

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science as a whole by precluding narrow and present-centric interpretations of issues. A reader will be able to appreciate the gamut of disciplines this can be applied to.

Historiography

This approach can be of great value to a historian in many different ways.

Firstly, it can help him to understand, formally identify and critically evaluate principles associated with different approaches and schools of thought (In our parlance, known as entities) and can help him select the best approach in a given set of circumstances. It can also enable him to modify and blend approaches, if required, to formulate new approaches, and can help him evaluate them from time to time. It would be an invaluable heuristic tool in helping him select the principle or principles that would serve him best in a given set of circumstances, meld them, and even extend them or modify them for optimal results.

Secondly, it can help him evaluate different approaches of historiography from the point of view of 'good science' and 'bad science' by rating them of different parameters.

Thirdly, it can also help him to evaluate characteristics of a particular culture at a given point in time, and formulate a study of cultures across periods and geographies, such that it can serve as a fulcrum and ammunition for the formulation of DPPF approaches. It can also enable him to evaluate changes to an entity across time and space and can help him carry out both a diachronic and a synchronic analysis.

Fourthly, it can help distinguish good approaches from egregious ones with respect to those followed in historiography. How do Hindutvavaadins, Marxist historians, Dravidian nationalists and Euro-centrists fare in the adaptation and implementation of our principles? This is something that needs to be evaluated through constant introspection and something that may be left to other professional scholars and the laity to decide.

Fifthly, it will enable him to identify the principles that will stand the test of time and can be readily used across time and space and those that cannot stand the test of time.

Sixthly, it will enable him to adopt dialectics that will lead to an explosion of scientific knowledge both in the short-term and the long-term.

Economics

This approach can provide the necessary tools and methods to evaluate the pros and cons of various approaches in economic theory from a comprehensive standpoint. It can also help evaluate other "Centrist" approaches such as Fabian socialism and the Nehruvian model once followed in India, and permit a fair comparison of various centrist approaches, backed by solid logic and reasoning. Economics being an inexact science, this will permit him to choose the best of the centrist approaches by benchmarking them to pre-selected goals. It can also permit an evaluation of approaches beginning from Adam Smith's earliest works on Economics to Marx's critique of capitalism and laissez-faire capitalism to Keynesian approaches.

Theology and Philosophy

This philosophy can be put to productive use to solve riddles and paradoxes in philosophy and theology and can be used solve vexatious issues further afield such as a balanced assessment of the idea of 'God' by making an honest attempt to reconcile diverse and divergent viewpoints by proactively seeking them out. Of course, dialectical approaches have been in use since time immemorial and at least from the times of Plato and Aristotle, and were formalized into robust methodologies fairly early (They are also widely believed to have been used in Ancient India) but it must be emphasized that Neo-centrism can infuse new strength and dynamism into what are essentially age-old approaches and take debates to altogether new levels.

Cultural Anthropology

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This approach can be of great use to the cultural anthropologist in formulating new approaches for ushering in rapid cultural change and for carrying out an analysis of the strengths and weaknesses of a culture. It can also help anticipate the future direction and end-state of a given culture or human society as a whole by adopting certain parameters and guidelines. It can help introduce pragmatism and positivity to the discipline and can actually be a fulcrum in ushering in warranted positive changes. This can be done by predicting pattern of cultural shifts based on the strengths and weaknesses of different cultures, their compatibility with human nature, their allure and glitz to make predictions about how cultures can interact and produce altogether new paradigms.

Analysis of Scientific Method

These approaches can also be formally used to analyse a scholar's methodology, evaluate it critically in all its core aspects, and then formulate the building blocks of APSA or a formal analysis of pseudo-scientific approaches. This will be the starting point of a formal dictionary of pseudo-scientific approaches which will prove to be an invaluable and an indispensable tool for scholars, authors, researchers, reviewers and the layman. It can also help analyse entire approaches such as Laissez-faire capitalism and Marxism to assess long-term viability. It can help bring down the time taken from the incubation of new scientific ideas and their formal wide-spread adaptation in such a way that it can lead to 'Scientific progress at the speed of light'.

As a tool for Process Improvement

This approach can be used as a valuable tool for process improvement also and can be used to complement other techniques such as Six Sigma and TRIZ. This can be used to identify and treat paradoxes after careful considerations of cost and economy, and a prioritization of issues. This will be carried out for profit maximization and value creation within the organization.

As a tool for evaluating Business strategy

This approach can be used as an invaluable tool for evaluating Business strategy. This can be done by identifying internal inconsistencies in processes and strategies, and by ordering principles on the basis of their universality. In such a case, an externally-mandated requirement such as customer requirement or legislation will take naturally precedence over internal processes, and suitable changes must be made to internal processes to satisfy external requirements. Similarly, short-term considerations must never be made subservient to long-term considerations (the two may however be merged) and issues with a wider geographical applicability must always triumph. This approach seeks to actively identify paradoxes, and seeks to nullify them through a combination of innovative thought and creative approaches for maximum monetary benefit.

As a tool for long-term planners

This approach can come in handy for planners and economists to devise long term plans and goals. In our approach short-term goals and considerations would always be subservient to long-term goals and considerations. For example, high GDP growth rate expectations in emerging countries such as the BRIC countries and their desire to dominate world trade and improve the lives of their people must be necessarily reconciled with ecological considerations that will take precedence in the long run. In our approach, long-term considerations must be merged with short term considerations and this would call for a reconciliation between short-term goals and objectives and long-term objectives. The two can lead a harmonious existence provided paradoxes are removed. However, this will warrant changes in models of economic development and investment in key technologies and areas of research as well.

Dialectics across disciplines

Neo-centrist approaches can prove to be extremely useful in the field of dialectics which may be defined as the science and art of weighing different (often mutually contradictory) opinions to arrive at the truth.

Neo-centrism which is an extension of Dialectics can be used in many different fields besides philosophy even though the core elements of dialectics may have been birthed in the context of philosophical discourse and debate. Neo-centrism can be used in fields as wide apart as Economics and different sciences, both exact and inexact with an attempt to either arrive at the truth, as would be most common in the case of exact sciences or to arrive at an ideal solution in a given set of circumstances as would be common in case of inexact sciences.

Let us now briefly analyse the book “An Uncertain Glory: India and its Contradictions Jean Drèze & Amartya Sen”.²⁴ This book was widely welcomed by some classical Marxists even though the progenitors of the book, despite their great emphasis on welfarism and their association with schemes such as the MGNREGA or the Mahatma Gandhi National Employment Guarantee act, have been recommending liberalization of the Indian economy in some form. (Particularly Amartya Sen). Left wing academics would see this as a vindication of their own stand and the failure of economic reforms. Supporters of economic reforms would however see this as a throwback to socialism. A meaningful discussion between the two parties would clearly address the following (a) What recommendations have the scholars made that can be construed as being of lasting value? (b) Is this merely whinging and whining or does it offer any constructive criticism? (c) Is growth always the panacea for social ills (d) Are any course corrections necessary in India’s economic policy?

One may recommend that this is carried out in true letter and spirit of dialectical approaches with each party willing to jettison his stand in the light of contradictory evidence, This would require a change in mindset and the slow decline of all ideologies in general.

Principle # 4 Stakeholder-focussed approach

One must strongly emphasize that all endeavours in historiography be stakeholder-focussed, and to a large extent, stakeholder-driven. Stakeholders in our context, may be defined as those individuals or entities which affect or are affected by the protagonist’s actions and behaviour. The first step in the process pertaining to ‘Historiography by Objectives’ that was proposed was to identify stakeholders, who could vary depending on the nature and the type of the work. However, in most cases, the basic list of stakeholders would be the same, and it would be unwise or unhealthy to remove any stakeholders from the standard list presented in our aforesaid paper without a proper justification. An additional list of stakeholders can be prepared by identifying target audiences of a historical work and identifying users of historical information, and by trying to envisage the beneficiaries of a sound and methodical approach to history writing. This would be known as the positive list. The second approach is to prepare a list of audiences whose unhealthy activities can be mitigated by the adoption of scientific methods to history-writing. This is known as the second list and may be referred to the negative list.

Stakeholders in the first or positive list could be

1. Students of History or those leaning history
2. Teachers of history or those teaching history
3. Educationists or those interested in historiography, related subjects or in education in general
4. The well-informed reader of history who knows and understands the difference between good history and bad history

²⁴“An Uncertain Glory: India and its Contradictions Jean Drèze & Amartya Sen”, Penguin 2015

5. The layman, naïve or the man in the street, the dogmatic and the superstitious who will be greatly benefitted by a scientific approach to history
6. Anthropologists whose research can be greatly enhanced by the adoption of scientific methods of history-writing such as those proposed in our papers
7. Linguists whose research can be greatly enhanced by the adoption of scientific methods of history writing such as those proposed in our papers
8. Comparative historians whose research can be greatly enhanced by the adoption of scientific methods of history-writing such as those described in our papers
9. Other scientists and researchers whose research can be greatly enhanced by the adoption of scientific methods of history-writing such as those described in our papers
10. Stakeholders who would benefit from the resolution of unsolved problems in history, such as scholars depending on the resolution of paradoxes for the advancement of their own sciences.
11. Scholar-defined stakeholders: the scholar must endeavour to add as many additional stakeholders to this list as possible by identifying users of information.

In the second list or the negative list, stakeholders could be

1. Scholars, alive or dead, who follow, have followed, an ideology-driven or a one-sided approach: Religious fanatics, Nationalists, Euro-centrists etc.
2. Other Scholars, alive or dead, with a narrow or vested interest, and those opposed to a multidisciplinary approach, collaborative efforts or a reconciliation of views.
3. Any pseudo-scholars, alive or dead, masquerading as historians and all other forces detrimental to the healthy progress of science including scholarship of a low calibre.
4. Any other approaches that would count as pseudo-science or pseudo-history and all known scholarship that would qualify as pseudo-history.
5. The scholar must likewise add additional stakeholders to this list based on his target audience.

The objective of the historian would ideally be to further the interests of the first list and counter the stakeholders on the second list.

A stakeholder-focussed and a stakeholder-driven approach, amongst others, can greatly streamline the field and ensure, without compromising on innovation, that it does not veer off trajectory. Obtaining feedback either from stakeholders or their proxies at regular or irregular intervals both formally and informally would ensure this.

Principle # 5 Integration with other sciences and structuralism

A sphere of influence may be defined as one or more areas or disciplines in which a scholar has the latent power or ability to influence development and the direction of progress even though he does not have any direct knowledge, experience or expertise.

Structuralism, on the other hand, may be defined as a method of interpretation and analysis of various aspects of scientific study which focuses on relationships between elements or fields of study in a wide conceptual system and emphasizes the thought that a wide-ranging and an over-arching inter-relationship across inter-related disciplines is far more important and efficacious than research in silos. According to Simon Blackburn, structuralism is "The belief that phenomena of human life are not intelligible except through their interrelations. These relations constitute a structure, and behind local variations in the surface phenomena there are constant laws of abstract culture."

Structuralism which first developed in the early part of the Twentieth century in a literary context, is now widely used in anthropology and sociology.

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From the point of view of a quintessential and archetypal historian, other fields of study a historian can meaningfully contribute towards are anthropology, sociology, linguistics, anthropology, genetics, economics and futurology.

The importance of structuralism in historiography increases manifold if the importance of historiography in relation to other social sciences is understood. Many scholars have emphasized the centrality of historiography in social sciences. To quote H.C. Darby, for example, "History is the central social science, of which all others must feed. It is the basis of social sciences just as mathematics is to natural sciences." Friedrich Meinecke states in this connection, "Historicism is the greatest spiritual revolution of the Western world, comparable to the Copernican revolution." According to Dilthey, "only Historicism can shatter the last chains which philosophy and natural sciences could not break."

The traditionally-inclined historian has however, arguably scored rather poorly in such pursuits, as he has, more often than not, been inclined to understand his role from a traditional, canonical perspective and perhaps from a blinkered and a myopic point of view. Amongst the worst of the lot have probably been Marxist historians who, despite their pretence, lip-service and la-di-da, have actually possibly impaired the cause of a wide-ranging and comprehensive study of economic history more than anyone else in the business, and failed miserably in this aspect; this is a statement may be left for other scholars to substantiate or negate. We say this not to set the cat among the pigeons, rub them the wrong way or to deliberately incur their wrath or displeasure, but to drive home a crucial and a critical point and to lay the facts bare for others to ruminate and cogitate upon. Admittedly, Marxist historiography has reigned supreme in many parts of the world, but as they say, in the land of the blind, the one-eyed man is king. This principle probably applies here, too, and criticism of Marxist historiography, whether in its traditional form, or its whittled down and rump form, has been wide-ranging and widespread.

To reiterate, the scholar has a sacred duty towards both society and the education system. A scholar in the social sciences has to act as a trendsetter and guide scholars in other sciences as well. A dogmatic adherence to one's point of view and ivory-tower scholarship in the name of academic freedom may be fine, but beyond a point, a reconciliation of view has to begin, and a scholar's personal interests have to be reconciled with his duties towards society. As scholars have coined the term 'dialectics', why not propose and formalize 'intellectual dialectics'? It must be emphasised here that scholars and intellectuals have the capacity to move towards a higher state of understanding and greatly increase the quantum of intellectual output as the technology and the research infrastructure are a far cry from what they were in the 19th century. We have referred to this as 'Scientific Progress at the speed of light'. This is only possible if the right kind of attitudes and collaborative efforts manifest themselves in science while leaving some room for human fallibilities.

The key premise of 'Scientific Progress at the speed of light' is that as the underlying infrastructure enabling a higher scientific output has been achieved due to major technological advances, this must translate into a much higher quantum of scientific output accompanied by the necessary checks and balances, and bottlenecks must be constantly identified and removed.

One approach may be for affiliated scholars to sign Codes of Conduct while leaving room for their individual creativity or be asked to undergo courses in scientific method. Talent recognition and nourishment, besides the necessary ecosystem to mentor scholars and award achievement must be put in place. In any case, ideological cronyism has no place in today's world, as this works against the principles of talent recognition and service to society. Another interesting approach would be to involve researchers from as many different nationalities and cultural backgrounds as possible into the gamut of historical research and research in allied disciplines, as this would provide some kind of an immunity from overgeneralization and Western stereotypes, and bring obscure and hitherto poorly-researched paradigms into the academic mainstream.

The globalization of science by itself therefore presents exciting possibilities that were formerly not envisaged, and if properly leveraged can facilitate a quantum leap in knowledge. This process must not be restricted to countries or regions such as the USA, Europe and India, but must include other regions such as China, Africa and South America as well. The effect of cultural mores on the direction and nature of scientific research and the quantum of scientific output is not yet well-understood or researched; yet the effects of multi-cultural approaches on scientific endeavour are likely to be

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stupendous. This may be referred to as the 'Globalization of science'.^{25 26} To advance the development of science as an integrated whole, structuralism would be a pre-requisite in historiography.

Structuralism and inter-disciplinary approaches can also, increase the power of a historian manifold, and greatly increase the prestige and standing of the discipline in the wider scientific community. We will therefore argue that structuralism would serve the historian very well in the Twenty-first century, and greatly boost his pedigree.

Principle # 6 Avoid presentism; adopt a long-term approach

Presentism, a term which already exists, (even though it may be in dire need of popularization) may be defined as uncritical and often naïve observance and adherence to present-day attitudes, values and concepts and usually includes a tendency to interpret past events from the prism of modern values and concepts.

In a previous paper, we summarily explored the fundamental causes of biases and prejudices in a historian unfavourably terminating in a flawed analysis. These were:

1. Zeitgeist or an uncritical adherence to the values of the present, its foibles and often glaring discrepancies and idiosyncrasies included without an analysis of the long-term implications of such an approach
2. A narrow cultural mind set which excludes other persons points of view or appreciating the appreciable elements of other cultures
3. Religious attitudes which shape his world view
4. Political ideas and constraints
5. Other ideological constraints
6. A historians' immediate environment such as his coterie and his peers – especially one which is tempered by some kind of an ideology or constricted thinking.
7. Absence of a personal commitment to objectivity or impartiality due to any of the above factors
8. Other personal attributes of a historian which are not conducive or amenable to a scientific approach
9. Errors in judgment and analysis or lower quality work arising as a result of all the above factors
10. Lack of awareness on latest tools and techniques and latest research carried out elsewhere that trigger course corrections and broaden his horizons.

We had also emphasized the term 'Objectivity in Mindset', which would be the keystone to all fundamental progress, and still do; this is rather unfortunately not exactly a hallmark or a forte of ideological outfits; Hindutva, Marxist and Dravidian nationalists included. We have been assembling a scathing and a damning indictment of such approaches all along. Some of our criticism has been direct, while some other pot shots and broadsides that were applied, have been nuanced, tongue-in-cheek, and often adorned with velvet gloves in the manner of a gentle persuasion. Objectivity in Mindset would require flexibility and non-adherence to dogmatic positions, and this can be achieved in the long-run through better science.

Most of the underlying and quantifiable causes of bias can be corrected in our view, and we therefore emphasize what one may call 'Objectivity in Mindset' which one must always seek to nurture and promote, towards the end goal of training historians appropriately and adequately. One must speak about 'Objectivity in Mindset' because it can be inculcated with proper training and greatly temper the ill-effects of bias and prejudice. Many historians of eminent fame have acknowledged that objectivity cannot be compromised even under the most adverse circumstances. Many other historians of eminent repute have called for objectivity in historiography. According to Butterfield, "Objectivity is the expression of history". According to P. Gardiner, a historian must be objective, and must not be driven by personal interests of any kind. Dilthey and Renier have opined that objectivity is one of the core

²⁵ Scientific Structuralism Peter Bokulich and Alisa Bokulich Springer 2011

²⁶ The Age of Structuralism: From Lévi-Strauss to Foucault Edith Kurzweil Transaction Publishers 1996

attributes of a historian. One of the key ways 'Objectivity in mindset' can be reliably fostered and inculcated is to avoid the perils and pitfalls of presentism and wholeheartedly and unequivocally embrace aeternitism and omnimodism.

The defining characteristics of presentism from our perspective would be:

1. Uncritical adherence to the belief systems and values of the present;
2. Non-analysis of the quirks and weaknesses of the present to draw lessons therefrom;
3. A non-critical rejection of anything that does not confirm to the values of the present without any further ado or analysis: this typically includes unsubstantiated statements, or attacking a culture or making ad hominem attacks without prevarication often from a narrow parochial standpoint or one that does not take into account a long-term analysis;
4. Non-awareness of other cultures across space and time, or both;
5. Inability to evaluate other cultures across space and time from a critical perspective so as to draw lessons therefrom;
6. Inability to understand and analyse issues from a long-term perspective;
7. Imposing the values of the present, often those culled from a narrow geographical context on the past;
8. Using the values of the present alone, often those culled from a narrow geographical context, to analyse the future.
9. Inability or unwillingness to carry out a study of changes taking place across time

The advantages of eschewing presentism and advocating aeternitism and omnimodism are as follows:

1. It helps avoid sudden and knee-jerk reactions to long-festered problems and glitches.
2. It avoids the need to make paradigm shifts and needless course corrections.
3. It reduces the latency between the incubation of an idea to its widespread acceptance and ensures that good ideas are not thrown out of the window or adopted late.
4. It leads to an exponential increase in scientific knowledge through the exchange of best-in-breed approaches.
5. It promotes and ensures human welfarism and ensures that progress is in conformity with long-term human well-being.

There are several classic cases of presentism, and we present a few of them below. Presentism may have been one of the follies of Karl Marx, as he analysed problems and sought out solutions through the narrow prism of a Nineteenth-century worldview, though perhaps not his only one. Another serious criticism is Marx's simplistic notions of phases in human history: he claimed these were Primitive Communism, Feudalism, Capitalism, and Communism. However, evidence may not have always borne this out, and different societies may have evolved in different ways and patterns of evolution may have varied widely from case to case. Karl Marx claimed that the earliest human societies were classless societies based on their claimed mutual co-operation and harmonious co-existence and absence of frictions of any kind, but this may not have been the case at all. This statement may not have been backed up by adequate data, as the historical age as it is now known it did not come into existence until much later.

Therefore, claimed analyses of early societies may at best be conjectures. We do not even know if savage societies in the Stone Age were classless, and if they were relatively classless, they were perhaps so because they were far less complex than modern societies, and because the concept of personal wealth and lavishness as it is known today, may not have existed at all or to the degree we are familiar with.

To put it in Marx's words 'Production relations' were much less complex in early societies. Even then, it was likely that clans, leaders, exploitation and barbaric cruelty existed in some form or the other, and was perhaps worse in some respects than what it is today. Even a relatively egalitarian society like that Indus valley civilization, which may not have had exploitation as it is known today, may have classes, and the Indus Valley was largely controlled and dominated by elites.

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Class stratification in contemporary Old World civilizations were more pronounced than it was in the Indus Valley, and a caste system existed in Post-Harappan India as well. Marx's theories never took into account man's competitive spirit and desire to dominate. With hindsight, exploitation manifested itself in its ugliest forms in communist societies, and Marx's stages of human evolution may be an over-simplified, one-size-fits-all approach.

The term capitalism is itself a very nebulous and a hazy term and compartmentalizing various types of societies such as the USA, Sweden and Malaysia into one broad category called 'capitalism' may be an over-generalization, if not a cardinal error. Such an approach would naturally preclude complex analysis of many different kinds. A Marxist historian, while using such an over-simplified approach may run the risk of committing grave errors in analysis. Also, the transition from a class society to a classless society may not always happen the way Marx envisaged it. This may happen, for example through legislation or reform, or through change in the nature of labour, or through better awareness or education, as has been proven time and again from experience. Again, most of Marx's prophecies failed to materialize.

From the point of view of a historian, it should be mentioned that Marx may have very naively assumed that conditions of the 1840s would not, could not be altered in any fundamental way without a revolution. However, in due course, there was political reform which Marx did not foresee. For example, in 1867, for example the British Parliament extended the vote to the British working class as well, bringing about changes in society. In addition, he did not foresee the consumer society or technological changes. Marx's concept of class struggle is suspect, and most scholars would consider it to be a gross over-simplification. Once again, the problem with class struggle is the use of an analytic tool appropriate to a certain time period (i.e. the Mid-nineteenth century) and in a specific geographical context (i.e. Europe) as a universal historical concept. As a theoretical insight, the term "Class struggle" is not as much of a universal historical law as it is an analysis of a specific situation. (Mazlish: 1984, p. 133) Thus, he was not free from zeitgeist. In addition, it must be stated the most of Marx's predictions did not come to pass. Another criticism would be that the Marxist historian runs the risk of trying to force-fit assumptions into other periods leading to erroneous results. Although Karl Marx introduced concepts such as 'Asiatic modes of production' later in his life, these were essentially tempered by European considerations.

Presentism can be avoided if,

1. A critical analysis to the belief systems and values of the present is carried out, including its foibles and weaknesses;
2. A very detailed analysis of the quirks and weaknesses of the present is carried out to draw lessons therefrom;
3. A detailed study of other cultures across space and time is carried out to draw lessons therefrom;
4. Analysis of issues from a long-term perspective is carried out;
5. There is no imposition of the values of the present, often those culled from a narrow geographical context on the past;
6. Future is not analysed taking into account the values of the present alone;
7. A study of changes taking place across time is carried out from time to time;

Doing this will lead to an exponential increase in knowledge across a gamut of topics and greatly benefit scientific endeavour as a whole. In sum, it will lead to what we have referred to as 'scientific progress at the speed of light'.²⁷

Principle # 7 Scientific method over logic and reasoning; avoid pseudo-scientific approaches

While no one would deny the fact that human biases and prejudices, and the errors and lapses arising therefrom may in large part be natural and cannot be entirely wished away with a magic wand, any healthy approach must seek to minimize and eventually work towards the reduction or elimination of

²⁷ Epistemology Richard Feldman Prentice Hall 2003

any kind of biases whether personal or ideology-driven, and all other kinds of prejudices and non-objective approaches in the longer term.

While quantifying and trying to minimize personal biases and prejudices, a trade-off between what may be considered quixotic and unachievable given the nature of human behaviour and what should be enforced in the greater interests of society may be arrived at through dialectical approaches and cogitation.

The core objectives of our approach would be:

1. To eliminate or make redundant ideology-driven approaches in the long term through careful scholarship
2. To eliminate or make redundant, approaches that quantify as pseudo-science or bad science in the long term
3. To popularize the canons of good science in the relevant circles so that the benefits of healthy scholarship can be disseminated.
4. To work towards a dictionary of pseudo-science and pseudo-scientific approaches as can be applied in the field of historiography in the long term
5. To work towards better collaboration amongst scholars across disciplines so that it will lead to mutual benefit
6. To work towards better collaboration amongst scholars across geographies so that it leads to 'Globalization of science'
7. To work towards a root cause analysis of scholar motives
8. To work towards congenial atmospheres in all disciplines to the extent possible
9. To work towards orchestrating this to higher scientific output, and "Scientific progress at the speed of light"
10. To work towards education systems that foster innovative and creative thought

While most of these aspects are wholly outside the purview of this paper, a taster of what might be achieved even by skimming on the surface is presented below:

Scholar motives, for example, can be gauged by Identifying affiliation, tracing antecedents, carrying out a critical analysis of scholarship, evaluation during an interaction with the scholar in question, perceived haughtiness, hubris or condescension, odd or unacceptable behaviour during the peer-review process (for example, refusal to review without assigning a reason, rejection without a report, ad hominem attacks, does not follow epistemology, diversionary tactics, introduction of red herrings, call to authority etc). Other characteristics of a pseudo-scholar are:

1. Preference of political forums over scholarly forums for debate
2. Inverted approach- a pseudo-scholar approaches popular forums first (often political ones), and then tries to isolate mainstream scholarship.
3. Ad hominem attacks or attacks against individual as opposed to bona fide scholarly criticism- an acid and a litmus test would be to evaluate how much of a claim still stands if ad hominem attacks are eliminated.
4. "You know nothing" attitude
5. Reference to race, nationality or religion in a debate
6. Adopting diversionary tactics
7. Does not consider contradictory data under a majority of circumstances. Therefore, a scholar makes use of selective data only.
8. Does not take into account criticism of ideology or approach over a period
9. A pseudo-scholar substitutes objective-analysis for Interpretations
10. Uses emotional blackmailing of some kind
11. Addresses emotive needs of audiences only to whip up hysteria.

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12. Politicking and ideology-driven interpretations take precedence over objectivity- Scholar discourages multi-disciplinary approaches

13. A pseudo-scholar tends to revel in self-aggrandisement and use of titles such as 'expert', 'world-famous researcher' etc. with a view to mislead the public.

14. A pseudo-scholar revels in grandiloquent announcements in the popular press in lieu of robust and methodical research

The following additional principles must also be borne in mind:

1. One must always acknowledge the fact, that in addition to human fallibilities, ideology driven approaches slow down the progress of science even further.

2. A scholar cannot be absolved of his guilt as he has permitted competing ideologies to flourish. - Devil's advocacy can be encouraged in specific contexts only: substitution of subjectivity and personal opinion with objectivity and irrefutability has to be the long-term goal.

Different types of ideological affiliations and proclivities in the Indian context include Hindutva, Dravidian nationalist, Dalit and lower caste Hindu, Colonial or imperialist, Marxist, Colonial-Marxist-imperialist nexus, African supremacist approaches impacting Indology, Dalit-Dravidian-African supremacist nexus, Indo-centric approaches, Euro-centric approaches etc.

Sadly, the vast majority of the Indian public has not shown any maturity at all in understanding the foundations of objective scholarship and has shown little aptitude in espousing the cause of science and scientific method and progress. Unless this very serious anomaly is addressed forthwith, and in true spirit of the game, India must perhaps bid farewell to all its aspirations of becoming a scientific superpower.

All such approaches fall within the boundary of pseudo-science in some form. Pseudo-scientific methods may be defined as a collection of beliefs or practices falsely and inaccurately considered as being scientific. Such beliefs do not follow any scientific method or fail all rigorous scrutiny, even though they may make a pretense or stake a claim to be true science.

Pseudoscience is often characterized by grandiloquent, contradictory, exaggerated or unprovable claims, one sidedness and over-emphasis on one-side of the evidence only in lieu of rigorous scrutiny and an unsystematic and haphazard incubation of thoughts and ideas. Pseudo-scientific approaches clamour to be recognized as valid science often making pompous and insidious claims to this effect.

Science is distinguishable from religious beliefs or spirituality because it lends itself readily and easily to empirical research and testing. It may also be distinguishable from poor quality science masquerading as high quality science. While Hindutva approaches may be wholly dubious and unscientific. Marxist approaches to historiography may qualify as being extremely poor quality science. We will soon figure out why.

We also recommend that any discussion on the terms 'science' and 'pseudo-science' be accompanied by a ranking on a scale of 0 to 5 or 0 to 10, zero being pseudo-science and 10 being very high-grade science that nearly corresponds to the acme of perfection. The digits in between would connote various possibilities ranging from poor-quality science to high-quality science. This would naturally be a vastly superior approach to compartmentalizing any output into just black or white. Needless to say developing parameters and aggregates for these is a pre-requisite, and yet wholly outside the purview of this paper.

The following are some pseudo-scientific concepts that have rather strangely become a part of public consciousness and that a historian must attempt to address and successfully negate, without bias or prejudice. A root cause analysis of the prevalence of such beliefs would be in order, as well as striking a delicate balance between scepticism and the thirst and hunger for knowledge:

Atlantis is a fictional island first mentioned in passing in Plato's works Timaeus and Critias. The idea of Atlantis became widely entrenched in the public consciousness in the ensuing centuries, and managed to spawn a plethora of pseudo-historical works. It was often considered to be a utopian paradise and

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the fountainhead of all ideas noble and worthy of praise and emulation. This idea still has currency among some sections of the educated and not so educated public even today.

Lemuria is the name of a hypothetical and wholly fictional and pseudo-scientific lost land variously located in the Indian and Pacific Oceans typically to the south of India. This concept may have had some scientific currency in the 19th century; however, the concept of Lemuria has been rendered obsolete by modern theories of plate tectonics. Today, the concept has been hijacked by Dravidian nationalists, who see it as a gateway to a hoary and an imagined past.

Erich von Daniken claimed in several published books beginning 1968, the most famous being the 'Chariots of the Gods', that extra-terrestrials or ancient astronauts visited the ages ago. Daniken claims that structures such as the Egyptian pyramids and Stonehenge were built by them. Although his works sold in millions and made him a multi-millionaire, few serious scholars would take him seriously.

The New Chronology is a fringe theory regarded by the academic community as pseudo-history. This theory argues that the conventional chronology of Middle Eastern and European history is wrong, and that events ascribed to the classical civilizations of Rome and Greece occurred during the more recent Middle Ages.

The Orion Constellation theory is another theory invented by Robert Duval. According to this theory there is a correlation between the arrangement of the Pyramids and the alignment of the stars in the Orion constellation, and that the ancient Egyptians had deliberately constructed the Pyramids based on the alignment of the stars in the Orion constellation. This theory is widely considered to be pseudo-science. This idea has also been supported by Graham Hancock who is considered to be a pseudo-historian and a pseudo-archaeologist.

Pseudo-history has taken on a multitude of interesting forms. Another example is the denial of the Holocaust by some anti-Semitic groups. Afrocentrism has also begun to take on many dangerous forms, and is even being taught in many schools and colleges in the United States of America.

In some cases, the distinction between history and pseudo-history may become blurred as in the case of Post-Harappan India, and a historian would be expected to lay his ideological affiliations aside, and contribute meaningfully to the study of genuine history in such cases. Categorization of anything which is unknown as pseudo-history may be a form of sceptopathy, and may itself qualify as a pseudo-science.

Let us now seek to understand and formalize the key characteristics which define pseudo-science²⁸:

1. Pseudoscience begins with a hypothesis often mired in pre-conceived notions that are self-defined—usually one which is appealing emotionally to at least a section of society, and then looks only for data which supports it, ignoring all other kinds of data. Thus, the ostensible goal of promoters of a pseudo-scientific concept is to vindicate their own stand by hook or crook, often to the detriment of the wider populace and the interests of science in general. This has typically been the approach of Hindutva demagogues and fire-brand leaders all along, who have an ideological axe to grind. We have discussed their nefarious tactics at great length in a previous paper, and it would be pointless to reiterate them here. Marxist historians too always look for, or reinterpret to suit their preconceived notions, and this alone would be enough to brand it as science of a low calibre. A formal study of Marxist methods to this end may be warranted, and we cannot stress this enough. This may ruffle some feathers and touch a raw nerve in some circles, but it still needs to be carried out nonetheless, and by a body of scholars with no ulterior motives or biases.
2. Practitioners of pseudo-science also do not often seek out evidence from one or more related fields of science, or verify if their postulates contradict well-known natural laws and principles and laws of science. They operate with pre-conceived notions and believe there is no more to be learnt.
3. In pseudo-science, the emphasis is not on controlled or repeatable scientific experiments. Instead it is on unverifiable testimonies, hearsay, grapevine and rumour. The need for rigorous

²⁸ Pseudoscience: A critical encyclopedia Brian Regal Greenwood Press 2009

scrutiny is often brushed under the carpet and conveniently ignored. In some cases, practitioners of pseudo-scientific approaches may go as far to indirectly state or hint that a discovery of the truth is outside their purview or jurisdiction, usually throwing indirect clues to this effect.

4. Pseudo-science lends itself to sophistry, dubious and convoluted logic, and these have been a hallmark of Hindutva proponents. Thus, practitioners of pseudo-scientific approaches always avoid putting their claims to rigorous and critical scrutiny and substitute this with polemics, rhetoric, mumbo-jumbo and casuistry. Practitioners of pseudo-science also often create hype and an aura of mystery to further their claims. They also resort to hate tactics or divide and sell tactics.
5. Pseudo-science often resorts to dubious methodology to further its claims such as call to authority, ad hominem attacks, questioning authority or misplaced comments regarding racial or cultural affiliation and nationality or gender.
6. Practitioners of pseudo-science also make clever use of the drawbacks and weaknesses of their opponents' approach to claim the infallibility of their approach. This is patently absurd, and clearly false, misleading and dangerous.
7. Practitioners of pseudo-science appeal to emotion rather than reason and make full use of their target audience's ignorance on a topic.
8. Practitioners of pseudo-science often make use of outdated data and promote outdated concepts cleverly.
9. Practitioners of pseudo-science often also attempt to avoid debate brusquely and peremptorily through side-stepping, dilly-dallying or procrastination.
10. Pseudo-science does not often progress as its progress is stalled by its own innate self-contradictions.
11. Practitioners of pseudo-science also have dubious long-term goals i.e. to drag or progress a field in a direction that is usually not conducive to science but suits their narrow and petty ends.
12. Practitioners of pseudo-scientific approaches may also be driven by vendetta or malice against an individual, or may seek to differentiate themselves from the rest of the world either subtly or not so subtly to further their agenda.
13. Pseudo-science (or bad science) can emanate from mainstream sources. One may want to cite the case of the Nineteenth Century school of Indology and Marxist historiography. In other words, good science may degenerate into bad science over a period of time. One may also draw to the readers' attention, Steve Farmer's approach in the Indo-Eurasian research list. In this case, their pronouncement on the Indus script was marred by discordant notes on "literacy", "clans and religious concepts", all of which were clearly made to mislead the public, with vested interests in mind. Elsewhere, they argue that they (the Harappans) could have encoded speech whenever they wanted to. Will any linguist buy this? This is a clear intention to misinform people and to deceive them given the fact that the man-in-the-street is typically no linguist. What is this then if not pseudo-science?
14. Pseudo-science may also achieve an aura of respectability in popular circles, and may intelligent men may believe them to be true, and at least for a brief period in time. For e.g. belief in UFO's, Aliens etc. However, in this era of globalization, the ubiquity of the internet, the digital revolution and understanding of cultures, pseudo-sciences are gradually expected to die out. One way to combat pseudo-science would be to ensure that scientific method is taught to students all across the world such that they can formulate their own opinions from a very young age.

Robert K. Merton ²⁹ has also defined additional norms to distinguish real science from pseudo-science. According to him, bonafide science possesses the following five attributes: (a) Originality: must present something new to the scientific community (b) Detachment: The scientists must not have any personal stake in the outcome of an experiment (c) Universality: Experiments must have universal value (d) Scepticism: Science must not be based on faith (e) Public accessibility: Results of experiments must be made available to the public at large. Most of these observations would apply to the field of historiography too.

²⁹ Robert K. Merton The Normative Structure of Science (1942)

We also strongly believe that compartmentalizing approaches, thoughts, ideas and processes into 'science' and 'pseudo-science' may not always work. Can anyone take the approaches of Hindutvavaadins, Marxist historians, Dravidian nationalists and Euro-centric Indologists and see which category they belong to?

Thus, ranking approaches on a scale of 0 to 5 or 0 to 10 may fit the bill instead. One must recommend that this exercise be undertaken with a great deal of anticipatory thought and comprehensive and well-weighted rankings, as it would entail enormous rewards for science. For this, one of the virtues would be patience and forbearance, and the fruits of the endeavour would be great. Of course, a rating of 5 or 10 as the case may be unattainable or even undesirable given the vagaries of human nature and the constraints and limitations that careerism always poses; However, the average rating of all endeavours in the field of historiography on our scale described above can be pulled up greatly if the principles enshrined in this paper are implemented, and all this will be to the general benefit of science and scholarly endeavour.

Pseudo-history may also be defined based on several characteristics. Scholars such as Robert Todd Carroll and Nicholas Goodrick-Clarke have developed criteria for identifying pseudo-history. The characteristics of pseudo-history loosely based on the works of these scholars are given below:^{30 31}

1. Treating myths as history without proper investigation
2. Reads the works of ancient or contemporary historians without applying due diligence
3. Attempts to support an ideology or a hidden agenda by nefarious methods
4. The proposer is affiliated to some political party or an ideological group
5. Makes the claim that truth is variable
6. Logical flaws, non-sequiturs and leaps of logic
7. Emphasizes interpretations over objectivity
8. Claims that competing ideologies have been allowed to flourish
9. Uses selective data
10. Distorts evidence
11. Uses hatred against a group or the conspiracy theory to claim legitimacy
12. Makes use of sensationalism in some form
13. Is driven by a monetary reward
14. Articulated hypotheses are highly speculative or dubious in nature

Definition of an ideology

The word "Ideology" owes its existence to the French word "idéologie" which was coined at the time of the French Revolution, when it was introduced by a philosopher, A.-L.-C. Destutt de Tracy, as a short name for what he called his "science of ideas". Crudely, explained, it may be referred to a collection of beliefs that are usually not fully tested or lack universal applicability.

David W. Minar describes six different ways in which the word "ideology" has been used in different periods in time, these being:³²

1. As a collection of ideas with rigid content, usually normative, prescriptive and non-changing;
2. As the form or internal logical structure that ideas have within a set and may not be compatible with external principles;
3. By the role in which ideas play in human-social interaction;
4. By the role that ideas play in the structure of an organization without currency outside the organization;
5. As meaning, whose purpose is persuasion; and

³⁰ Carroll, Robert Todd. *The Skeptic's dictionary*. Hoboken: John Wiley & Sons (2003)

³¹ Nicholas Goodrick-Clarke. 1985. *The Occult Roots of Nazism: Secret Aryan Cults and Their Influence on Nazi Ideology: The Ariosophists of Austria and Germany, 1890–1935*. The Aquarian Press

³² Ideology and Political Behavior David M. Minar *Midwest Journal of Political Science* Vol. 5, No. 4 (Nov., 1961), pp. 317-331

6. As the locus of social interaction.

According to Willard A. Mullins an ideology is composed of four basic characteristics:³³

1. It must have power over cognition and must seek to control or influence individuals
2. It must be capable of guiding and altering one's evaluations and patterns of thinking
3. It must provide guidance towards action or goad people towards committing actions; and
4. It must be comprised of logically coherent beliefs that hold within an entity.

Terry Eagleton provides some further definitions of ideology as follows:³⁴

1. A body of ideas characteristic of a particular social group or class;
2. Ideas which help to legitimate a dominant political power;
3. False ideas which help to legitimate a dominant political power;
4. Systematically distorted communication;
5. That which offers a position for a subject;
6. Forms of thought motivated by social interests;
7. Identity thinking;
8. Socially necessary illusion;
9. The conjuncture of discourse and power;
10. The medium in which conscious social actors make sense of their world;
11. Action-oriented sets of beliefs;
12. The confusion of linguistic and phenomenal reality;
13. Semiotic closure;
14. The indispensable medium in which individuals live out their relations to a social structure;
15. The process whereby social life is converted to a natural reality.

In order to carry out a health-check from time to time, a study of the direction of research in historiography in various areas, the nature of collaboration between scholars, the issues addressed and unaddressed by scholars in the absence or infeasibility of a centralized governing body may be healthy, and may become a major field of study.

In addition to APSA's, this field, comprising of individual scholars, may address process-related issues as well, and process improvement methodologies, and may also be driven by metrics, which would necessitate action. For example, wide public acceptance of a patently absurd proposition or neglect of a brilliant piece of study for an inordinate length of time to the detriment of science and scholarship, would indicate that something is wrong and would normally warrant an RCA and course-corrections.

Another example would be a substitution of robust or rigorous research aimed at an erudite audience with sensationalized press releases aimed at the general public. Polarization of views among scholars is another sign that intervention or augmentation of research is required. This study would also ensure that society and humans do not fall collectively into traps and pre-empt, at least in the longer-term, situations such as the near-total takeover of Indian historiography by Hindutva in the 2000's.

Marxist historians in India have insisted that many interpretations are possible, and have harped on this ad nauseum. They have even unfortunately argued, whenever it has suited them, or their petty ends, that the 'Hindutva School' of historiography has also been allowed to exist since India's independence. This is bound to evoke suspicion in many quarters as if it were a vindication of their ideology-bound and dogma-driven approach and an earnest pleading for a public mandate to permit their ideology-driven approaches to continue even if there were inimical to science or scholarship. They have of course never moved towards a reconciliation or have never ventured beyond the confines of their dogma-driven approaches. Some basic principles such as examination of all data, whether amenable to a viewpoint

³³ On the Concept of Ideology in Political Science Willard A. Mullins American Political Science review June 1972

³⁴ Ideology An Introduction Terry Eagleton Verso 1991

or not, must also be followed under all circumstances as should also be a balanced and an ideology-free approach and one that is free of any preconceived notions or predilections.

A balanced approach must always be stressed and emphasized, and few would deny the fact that Marxist historians in India have overlooked this, as also have Hindutva-driven ideologues. As we have pointed out in an earlier paper, one kind of bias legitimizes every other kind of bias, and while Marxist historians may have no malafide intentions per se, this kind of an approach permits their scholarship to be replaced by a more dangerous ideology like Hindutva in a generation or two.

The fact that the average age of the top five Marxist historians in India as of 2016, was around 84 years speaks volumes for itself. Thus, the obvious conclusions are (a) Marxist historiography in India cannot continue and is doomed to failure (b) Its death can come about due to a variety of causes such as death of its practitioners, senility or old age (c) its collapse may also be cataclysmic like the collapse of the Soviet Union and may be brought about by the takeover of the field by other ideologues. (d) Its collapse will be disastrous, as there are no credible alternative approaches to history, and a fossilized-approach has ensured that textbooks have not been updated for decades. (e) Marxist historians many of whom may be mollicoddled and cossetted from the harsh realities of the real world by their ideological constraints may not even be willing to come to grips with the rapidly changing scenario of the Twenty-first century and perhaps therefore live in a make-believe world and a constant state of denial.

Therefore, there would be a world of a difference between good science and bad science in this respect. Bad science would often take recourse to pseudo-scientific approaches of one or more types to justify itself, before killing itself and fading into oblivion. A more detailed assessment of all pseudo-scientific approaches from a wholly neutral standpoint should endorse our view.

Principle # 8 Objectivity and the quest for the truth; intellectual honesty and objectivity of mind-set

Objectivity may refer to the state or quality of an idea or proposition being true regardless of an individuals' biases, prejudices, or interpretations arising due to an ideological mind set or pre-disposition or the originators or interpreters social, socio-political or socio-economic background. An idea is considered to be objective when its truth conditions are met without any biases induced by either its originator or interpreter.³⁵

There are many approaches to achieving objectivity. One is to ensure a high-quality education system that seeks to drive innovation and creativity. The second is to create enabling factors that can deliver an exponential increase in knowledge such as access to knowledge and information. The third is to work towards elimination of ideologies and ideologically-driven approaches. The fourth is to harness and synergize creativity of thought across geographies. We had referred to this as 'Globalization of Science'. The fifth is to ensure that a scholar get his work right the first time. This would naturally be possible only in the presence of an over-arching research infrastructure, and what we called 'objectivity in mind-set'. An emphasis on principles over methods and procedures would greatly help, and these would lead to the inculcation of core scientific values.

Objectivity and a scientific temperament have typically increased through the ages primarily due to technological breakthroughs that have led to an exponential increase in knowledge and created new vistas for collaboration. However, many of these have involved little or no proactive effort on the part of the scholar; the process can be greatly speeded up if proactive measures are conceptualized and implemented.

One way to achieve objectivity is to adopt Dialectical methods and approaches. Dialectics or dialectical methods, refer to debates between two or more people holding different points of view about a subject with the goal of establishing the truth through reasoned and structured arguments. The term was first

³⁵ Objectivity Lorraine Daston, Peter Galison Zone Books 2010

used by Plato's in his Socratic dialogues but this approach has also been common European and Indian philosophy for nearly two thousand years.

The idea of dialectics was also popularized by the German philosopher Friedrich Hegel. In Hegel's approach, there are three concepts thesis, antithesis and synthesis. A thesis refers to a new idea, often not fully tested that is bound to be flawed or full of errors, and is therefore be described as one that is likely to attract opposition. This opposition may be described as antithesis. Reconciling the two points of view is likely to lead to a synthesis which becomes the starting point for another round of reconciliation. This may be referred to a triad. This process may be continued until all criticism is addressed and a state of truth or near-truth is reached. Karl Marx is also believed to have used this technique. However, this was flawed in that it primarily sought out only material aspects of an issue. ³⁶

RERS: RERS, or Reflective equilibrium through role-swapping, a term we had introduced in an earlier paper, refers to the dialectical exchange of points of views and ideas without the other party being physically present. This assumes added importance in fields such as Historiography where the party opposed to a set of ideas may be either unavailable or dead.

FDARC: FDARC or Formal Dialectical approaches for the resolution of conflicts was another idea that was discussed.

The key principles in case of FDARC are:

1. The party submitting his proposal is asked to present all his evidence in writing
2. His ideas can then be criticized by the opponent using proper scientific reasoning and methods
3. The initial party can then respond using additional evidence
4. This process can continue until a higher state of understanding is reached
5. Unfair practices such as use of undue influence and pseudo-scientific approaches should not be allowed
6. An ombudsman, an umpire or an arbiter may be appointed, if required to initiate and oversee the entire process, including selection of parties.
7. All proceeds along with evidence must be maintained in writing.
8. Both parties must, in the natural world, support their own stand, and we may emphasize, as fervently and stridently as possible. The selection of the right parties, is of paramount importance, and their competence must be beyond the shadow of a doubt. One can also insist that the "Best person for the job" is selected. These requirements are a counter-weight to prevent frivolity of arguments.
9. Arguments without substance, or those driven by sophistry or polemics will not be encouraged.
10. Outright prima facie rejection of claims without scrutiny of evidence is not encouraged.
11. All claims made at different points in time may be subjected to this process; thus the process is expected to be centred on an issue; the parties must always bear in mind the fact that the objective of the exercise is to resolve issues and move towards a higher understanding.
12. This approach must always be complemented by a study of obloquy or public criticism, if any, of the scholar
13. The verdict, under no circumstances will be limited to outright acceptance and outright rejection. Various scenarios will need to be identified either upfront or during the process of debate and need to be added as outcomes of the final verdict.
14. Outright rejection will be used only as the last resort, and will be used only if the claim can be conclusively disproven. Ideally, the case will be marked as inconclusive unless conclusively disproven.

³⁶ Relating dialogues and dialectics Leslie A. Baxter Barbara M. Montgomery The Guildford Press 1996

15. Scholars are strongly encouraged to improve the methodology itself. Thus, these techniques are a vast improvement over standard devil's advocacy techniques.

CRCDE or Continuous reconciliation of contradictory data or evidence

In the case of CRCDE, the key principles are

1. contradictory data or evidence must be aggressively sought, and such data or evidence is nothing to be afraid of
2. If contradictory data or evidence exists, the model is over-simplified
3. Reconciliation of contradictory data will always move us towards a higher state of understanding
4. if contradictory data is left out from an analysis, a justification may be required. Contradictory viewpoints may however be left out, if not backed up by data, or if the methodology used by the other historian has been convincingly or comprehensively refuted by the historian in question. In case of Reflective Equilibrium through role-swapping (RERS), the scholar learns to put himself in the shoes of all other stakeholders who would benefit from the work or be impacted by it, and does this one stakeholder at a time. He then tries to look at issues from the other party's point of view, or evaluate how he would react to it using that party's known ideological affiliations, dispensation, antecedents or other relevant information as a base. He documents his observations and then modifies his work accordingly, or generates new objectives. A key advantage of this approach would be that it would save time, effort and energy, and works in a field such as historiography where the other party may be unavailable or dead, and could be used in conjunction with other approaches. These approaches can be adopted in addition to other dialectical approaches such as those which were propounded by Hegel and reinterpreted by Marx, and other approaches such as Rawls's reflective equilibrium, standard Devil's advocacy & Brainstorming techniques such as the Delphi technique and Edward De Bono's Six Thinking Hats. Dialectics also form the foundation of Ashtuller's TRIZ techniques.

QEPIS: QEPIS or Quantification of effects of pseudo-science or Ideologically driven scholarship would seek to quantify the effects of such scholarship and its impact both within and outside the field and institute it in practical and realistic terms.

Analysis of a scholar's mind-set through a Root Cause analysis and an investigation of ideological affiliation would also greatly assist in the dialectical process as this would be a pre-requisite to begin the dialectical process.

Analysis of third-party reactions through a Root cause analysis would betray his intentions and expose other hidden agendas and ideological affiliations. This would give a heads up before dialectical approaches are initiated.

RECA: RECA or Reflective equilibrium through critical analysis would also be an independent and a self-directed method of critical analysis that seeks to function effectively in the absence of an opposing party.

Identification of proxies: Proxies may also need to be identified, wherever possible. For example, if the author of a historical work or a textbook does not deem it appropriate to contact his students, he contacts their teachers instead.

Reflective equilibrium through analysis of assumptions and implication of a principle, method or an approach particularly the opponent's ones would be another pre-requisite to starting the dialectical approach. Here is an interesting example of this:

Party A proposes that all scripts with short inscriptions are not scripts. This has many implications. One among them would be that all signs on streets are not scripts. Does this assumption hold good? If it does not, the hypothesis itself is not.

Analysis of an issue from a non-active stakeholder's approach would prove beneficial in a wide variety of circumstances. For example, in a New economic policy, the voice of the suffering and mute millions can be listened to as it would help re-assess issues from a completely different perspective.

CRBOK or Critical re-examination of entire body of knowledge

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Wherever a reconciliation between varying or diametrically opposite points of view proves difficult, we would also recommend a back to the basics approach or CRBOK (Critical re-examination of entire body of knowledge) which essentially involves revisiting and questioning every assumption made by every scholar in the field and re-examining the entire corpus of scholarship or scientific knowledge critically. As this would, under normal circumstances, be difficult or time-consuming, this may be encouraged only under specific circumstances when a scholar believes a re-examination of basic principles or assumptions is warranted or absolutely necessary, and where assumption has been built upon assumption, causing an entire superstructure to be built on erroneous assumptions.

Principle # 9 Emphasis on research and the resolution of unresolved issues

The research component in historiography would include research into the core aspects of historiography and all other allied areas. a historian would be expected to be capable of providing support on areas such as the history of scripts, the history to metallurgy, the history of science and technology among other areas which most present-day scholars such as conservative and staid Marxist historians have failed to address. ³⁷

Here are some potentially controversial topics worthy of research with a possible bearing on culture and social issues, and with strong religious or ideological underpinnings. However, these topics have not attracted a large number of professional historians to date, and we hope this will change in the years to come.

The Shroud of Turin: The Shroud of Turin is a cloth made of linen bearing the image of a man that is believed by some orthodox Christians to be the burial shroud of Jesus of Nazareth dating back to 2000 years and is now carefully preserved in Turin in Northern Italy. Radiocarbon dating tests carried out some years ago dated the cloth only to the Middle Ages. The shroud is respected by many Christians Catholics and Protestants included. However, the Catholic Church has neither formally endorsed nor rejected the shroud as yet. The early history of the Shroud of Turin is considered to be extremely unreliable. Some sources however claim it was known from the 13th century, while this is disputed by most other scholars. ³⁸

Jesus lived in India: The idea that Jesus lived in India for a portion of his life both in his youth, and again in his old age, is a proposal put forth by Holger Kersten. The author also claims that Jesus lived in Kashmir till a ripe old age of ninety. Similar ideas were also proposed by Mirza Ghulam Ahmad, the founder of the Ahmadiyya Movement and others. Such ideas are considered blasphemous by the Church and by orthodox Christians, and the evidence presented by the scholar must be thoroughly investigated before any logical conclusions can be reached.

The Dead Sea Scrolls are a collection of nearly a thousand different texts many of them in poor and illegible condition discovered between 1946 and 1956 in eleven caves in the West Bank around two kilometres from the shore of the Dead Sea. The consensus is that these Scrolls date from around 200 BC to 100 AD. The Dead Sea Scrolls may throw further light on the origin of Christianity. ³⁹

History and dating of the Qur'an: The History of the Quran refers to reliable history of the Qur'an purportedly during the life of Muhammad, and its canonization some centuries after his death. Muslims believe that the version of the Quran as is known today was compiled by Uthman, the third caliph between 644 AD and 656 AD, while some other scholars believe that the Qur'an in its present form dates to only the 9th Century AD. However, other discoveries such as Qur'an in Yemen at the Great Mosque of Sana'a, the codex Parisino-petropolitanus manuscript, among other have plunged the field into turmoil and confusion, and it may be judicious to wait for reinterpretations to emerge. ⁴⁰

³⁷ Howell, Martha & Prevenier, Walter(2001). From Reliable Sources: An Introduction to Historical Methods. Ithaca: Cornell University Press. ISBN 0-8014-8560-6

³⁸ The Truth about the Shroud: Solving the mystery Regnery Publishing Inc. 2010

³⁹ Jesus lived in India Holger Kersten Penguin Books 2001

⁴⁰ Sadeghi, Behnam; Bergmann, Uwe (2010). "The Codex of a Companion of the Prophet and the Qur'an of the Prophet". *Arabica* **57** (4): 343–436. doi:10.1163/157005810X504518

Principle # 10 Comprehensive and wide-ranging approaches

Scholars are expected to adopt comprehensive and wide-ranging approaches by actively and aggressively seeking out and hunting down new vistas and horizons within the legitimate realm of historiography. For this to materialize, scholars of high calibre must be encouraged and nurtured, and this would be better possible if the field of historiography is suitably modernized and expanded to cover more mundane and practical considerations as well. This may sound like a catch-22 or a chicken and egg situation in reverse, but the principles proposed in this paper can orchestrate an exponential increase in knowledge, and to the benefit of science and society as a whole.

Examples of such areas of study are the history of science, the history of metallurgy, the history of scripts and the study of economic history. Historians can also greatly contribute to other areas of study such as the history of linguistics.

Principle # 11 Positivism and pragmatism

Positivism refers to a pragmatic attitude or approach towards issues, and one that resonates with positive energy and dynamism, and a burning need or desire to bring about positive changes in society and science. Pragmatism, on the other hand, is an approach that evaluates theories or beliefs in terms of their practical application and utility. Pragmatists consider science to be an instrument or tool for prediction, problem solving and action. Pragmatists believe that most concepts and topics must be primarily viewed in terms of their practical uses and applications, and that ideas that have practical uses and applications must naturally take precedence over other ideas.⁴¹

Principle # 12 Internationalism and Collaborative approaches

Another key area of emphasis in this age of globalization would be an international or a global outlook. Internationalism is an idea which advocates a greater cooperation among nations and peoples as opposed to a jingoistic, chauvinistic or ideological outlook. Supporters of this principle are often referred to as internationalists, and very strongly believe that the people of the world should unite across national, political, cultural, racial, or class boundaries to advance their common interests, thereby putting the common interests of humanity at the forefront, and above all other considerations. This approach would warrant a significant change in mindset, and practitioners of this approach are also likely to put the interests of science way above ideological and parochial considerations.

There may be wide differences in approaches depending on the nationality or the culture of the scholar in question even in this age of globalization. Historians must attempt to bridge this chasm through collaborative techniques, and attempt to forge consensus across a plethora of issues by seeking to proactively identify cultural differences and differences in approach across cultures and bridging them. Indians may largely have been seen by outsiders as a superstitious lot with, no interest in global issues and no inclination towards scientific methods although this is largely changing with the onslaught of globalization. Indians have also typically viewed issues through religious and Puranic or mythological filters, and hence their characteristic misjudgement on many issues.

However, Indians may typically make a pretence of agreeing with their opponent in a dubious attempt to show respect to diversity of opinion and may make an outwardly appearance of agreeing with ten conflicting points of view. Germans may have been relatively fixated in their views requiring literally an intellectual bulldozer to make them change their points of view. The Italian temperament, on the other hand, may have been more like that of Indians. The American approach, on the other hand, may have been characterized by intense creativity, but marred by a naiveté in the understanding of issues from the perspective of other cultures. These differences, may be eventually be bridged by what will called 'Globalization of science' and an international approach and the resultant benefits will be there for all to see. We have spoken extensively about the 'Globalization of science', as we feel it holds the key to better long-term progress. There can be many different ways this can be put to work. In a proposal presented in a previous paper, we proposed that there would be three teams:

⁴¹ Pragmatism, Michael Bacon Polity Press 2012

Under our proposal, any team will comprise of region-specific teams, and it is likely that there will be several such teams in place representing each region. The key pre-requisite here will be a thorough knowledge of local histories, conditions, culture and languages. Ideology-driven approaches will be strongly discouraged and it is expected that members of this team possess a scientific mind-set and a fair modicum of competence in all allied areas too. However, nationalistic approaches are a strict no and must be eschewed always. This team may comprise of different sub-teams representing different specializations. Members of region-specific teams are expected to interact on a regular basis with members of the core or administrative team. People from all over the world should be allowed to participate in all scientific endeavours regardless of religion, race and nationality as this will bring diverse viewpoints to the table.

1. An attempt must always be made to understand region-specific issues as region-specific issues may often influence and dictate global issues. For understanding region-specific issues, specialized teams may be required
2. Scenarios must always be formulated based on inputs from different regions, and not from just one region
3. An attempt must be made to understand the impact of culture and cultural differences on scholar behaviour and therefore on scientific endeavour
4. The positive attributes of different cultures and scholars belonging to different parts of the world must be leveraged to maximize scientific output
5. Dialectical approaches may be carried out for both region-specific and global issues to maximize scientific output
6. Refine hypotheses, historical models and paradigms based on inputs from different regions.
7. Analyse the causes for low intellectual output in specific regions and propose and implement remedial strategies
8. Leverage all the above to create 'Scientific progress at the speed of light'.

In addition, there will be over-arching international teams which would coordinate work across geographies. These would be as below:

1. The Core or administrative team would provide strategic inputs to various teams and also carry out administrative functions. It is expected to liaise and co-ordinate between the various teams as well.
2. Specialized team will comprise of domain-specific experts and may be brought in as required. Examples of such domains are archaeology, linguistics and genetics.

This approach will add more value to the field of historiography in general and broaden the historian's horizons as well. It will also positively impact traditions of historiography in individual nations as they benefit from the enhanced awareness and quality of work: as they often say, a rising tide always lifts all boats.

Principles # 13 Focus on Cultural studies from a historical perspective as a tool of emancipation & Focus on social betterment and cultural change (For e.g. Role of religion) through innovative techniques

Another interesting but potentially potent tool available at the hands of the innovative historian is the quest for newer methods to bring scientific thought and awareness to the masses. This is now possible because of the anticipated gradual disappearance of the boundaries between history and the various sciences. For example, educationists in the United States of America, and elsewhere have, and with full reason, cried hoarse about the inclusion of theories not backed by substantive underlying scientific evidence, such as the Theory of Intelligent Design or creationism. While such educationists deserve to be applauded for such initiatives, it would also be necessary to explore the underlying causes for the prevalence of such beliefs in the human psyche.

One possible explanation for this is that scientific versions of history and scientific theories of evolution have not been fully ingrained in the human psyche, as yet, and are not yet counted on in the daily

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experience such that the man in the street is either not aware of alternative scientific explanations or falls prey to what some anthropologists refer to as cognitive dissonance. This is extremely common in countries like India, where tradition reigns supreme, and warped and popular misrepresentations of history have existed in the popular consciousness since time immemorial. What may now be necessary is to ensure that the origins of Indian culture are logically and scientifically explained to readers, and answers to all questions students ask are available in mainstream literature and text books, such that alternative views are rendered obsolete and eventually left by the wayside. This approach in itself is likely to have a major positive impact on the Indian psyche, and this itself can be a major weapon in the fight against superstition and blind faith, can do in India what Charles Darwin's theory of evolution did in the west one and a half centuries ago, and can even be construed as the foundation of what we called "Scientific progress at the speed of light".

As usual, Marxist approaches are utterly at odds with the basics or common-sense, as they do not take into account the working of the human psyche, and their approaches invariably and inevitably throw up unsavoury and unintended counter-reactions. Marxist historians appear to get the wrong end of the stick always, and as such, it is the duty of other scholars to warn them that they are acting against national interests from a narrow Indian perspective, and against the interests of science and scholarship as well. Scholars must also eventually work towards a quantification of ills associated with all ideologies without prejudice so that future generations of students and scholars can be warned accordingly, and adopt course corrections wherever warranted.

Another innovative approach would be to combine local history with international history and various sciences and milestones in human endeavour, besides those dealing with the origin or development of various technologies such that the story of human endeavour is brought out as a cogent and a logical whole, nipping all forms of nationalistic-history writing automatically in the bud. A still more innovative approach would be to combine this with standard theories of human evolution and indeed the evolution of all species over hundreds of millions of years, given our greatly enhanced understanding of the earth's past, bringing about a syzygy in various fields of science.

We say this because awareness of basic science is extremely low even among the better educated; an anachronistic approach to learning may be partly to blame for this; the layman in India, with his half-baked knowledge of mainstream theories he usually does not believe, and a lack of even a basic knowledge of human and natural history is then a prime target for people with vested interests who want to deceive and exploit him or turn him around to their point of view.

Over the past couple of decades beginning from the mid-1980's, astronomers have detected over three thousand planets around neighbouring stars other than our own sun, with a vast majority of them having been discovered in the past couple of years alone. Our Milky Way galaxy alone, with over 400 billion planets (there are millions of galaxies like the Milky Way) may contain between 400 billion to two trillion planets, and using a conservative application of Drake's equation, several tens of thousands of intelligent civilizations, perhaps even more. This figure has to be multiplied by the number of galaxies to arrive at the number of intelligent civilizations in the universe.

These theories are a far cry from, and a vast improvement over Biblical and Hindu theories of creationism, and to state the very, very obvious, the two are wholly incompatible with one another. It would also be extremely obvious that older theories were but manifestations of man's limited scientific knowledge at the time, and the limited technology he had available at his disposal. Without delving into controversial aspects such as the existence of 'God', a term which perhaps has not yet even been satisfactorily defined, thereby rendering any debate meaningless, the historian can make an attempt to integrate his science with allied sciences, picking up the threads from where scholars of other sciences have left them off, to present a complete picture to the untrained and the gullible layman. While most traditional historians would consider such an effort to be wholly outside their gamut, this would unlikely to be an exercise in futility, and the rewards in terms of raising the general levels of knowledge and awareness in the common man and battling superstition and blind faith may be immense and gratifying. This is likely to have ripple-effects on the well-being of societies as a whole, and cults, sects and religious dogma may eventually be consigned to the rubbish-heap of history.

We classify approaches towards religion into the following three categories from the point of view of our approach:

1. The religious fundamentalists approach or an ideologically-driven discrimination between religions. Examples of ideology-driven approaches are presented as a part of this paper. Those who adopt an ideologically-driven discrimination between religions may not admit to doing so; in addition, they may also be falsely accused of bias or prejudice. All accusations of bias and prejudice must be quantified and bias must be proven to be systemic, inherent or well entrenched. All concerned parties may need to enter into a dialogue, and for this, the approaches in this paper may be followed. The ill-effects of such bias or prejudice from the point of view of scholarship may also be documented along with its ill-effects on science, scientific endeavour, and the counter-reactions it is likely to produce.

Examples of ideological bias or ideological fixations of which religion forms a part are given below. While it must be admitted that this list is partial to India, its principles are more or less universal across the globe, and must be fought if it conflicts with objectivity. If this happens, and objectivity is systemically or routinely compromised, it qualifies as a pseudoscience.

- The Hindutva contempt for the Mughal chapter in Indian history
- The Hindutva tendency to glorify the Indian past, particularly Aryan culture to the wilful detriment of all other cultures or subcultures in the subcontinent.
- The over-arching Hindutva obsession about the origin of the 'Aryans', to the exclusion of all other debates in Indian history and anthropology
- The Hindutva contempt for the rise of Buddhism and the decline of Vedic culture after 600 BC and the conversion of Asoka to Buddhism
- The Hindutva attempt to play down the role of the caste system and all its attendant ills.
- Bias arising out of Marxist preference for periods where the caste system was not on force or the Marxist notion that religion can be wished away or forgotten through suppression of specific periods in Indian history.
- Anti-communist bias in capitalistic societies such as the USA and the wanton vilification and demonization of the USSR
- Anti-capitalistic bias in communist societies such as the erstwhile USSR and the glorification of communist ideals
- Anti-Dalit viewpoint of Hindutva historians, and its perpetuation through indirect methods such as the criticism of the defunct Aryan Invasion theory
- Anti- upper class view point of Dalit historians some of whom even go to the extent of considering Sanskrit to be a polluting influence on other Indian languages
- Pro-Semitic tendencies of Hindutva ideologues who tend to support Israel in the Palestinian conflict
- Anti-Semitic tendencies of Marxist ideologues who tend to support Palestine in the Palestinian conflict.
- Indo-centric bias among Indian scholars who tend to glorify India's past by making exaggerated claims to impress Western scholars
- Euro-centric bias among European scholars who tend to emphasize the achievements of the West and suppress Indian history
- The tendency of Marxist scholars in India to adhere to colonial constructs to suit their own ends and vindicate their own ideological beliefs
- The Dravidian nationalist's view point of 'Aryans' as invaders

2.. The secularists approach: This is a well-intentioned, if somewhat naïve approach to religion. It assumes, and in most cases, wholly in good faith, that all faiths, religions, doctrines and ideologies are equal and ought to be respected equally. A key aspect of this approach is to ensure that sentiments of different religious groups are not hurt. Such approaches may work well in the short to medium term and help establish a modicum of communal harmony. However, this approach fails to take into account the fact that all religions may not be necessarily equal and different religions contain differing amounts of good and bad. It does not seek to eliminate the ill-effects of religion from society. This is notwithstanding the fact that there have been many efforts to reform religion in the past, many of which have met with a

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reasonable quantum of success. A key reason for adopting the aforesaid approach in earlier times was perhaps to maintain a semblance of communal harmony, and the fact that a critical analysis of religion may have been beyond the capability or purview of local historians in various societies.

3.. The critical analysis approach: The critical analysis approach that we now advocate calls for a critical analysis of all religions against the backdrop of the twenty-first century and encourages rigorous and impartial study of all religions devoid of any religious or ideological underpinnings. Our approach recommends that this would be the only way forward, and must ideally be carried out as subtly and effectively as possible without offending the feelings of any community. All religions and religious dogmas are unequal; not acknowledging this would be fallacious. Equating Islam and Jainism or Hinduism and Christianity for example, would be untenable as these are all very different ideologies or philosophies which originated under completely different circumstances and in different geographies or were shaped by different forces at different points in time, or may contain different philosophies that are either compatible or incompatible with modern notions of civility and decorum.

This must not be construed as an unachievable idealistic goal; it is, contrarily, the crying need of the day. This is a process that may take several decades, but it must be initiated nonetheless now, and scholars would be well-advised to adopt a careful and a cautious approach, and thereby set in motion a process that would eventually culminate in religious reform and mitigate the ill-effects of religions. A critical analysis of religion must not only encompass hermeneutical study but also third party interpretations of religion, an analysis of fringe elements and cults in any religion such as the RSS and the ISIS, and their impact on society, so that an overall assessment of a religion can be made. However, it would be natural for a scholar to adopt a localized approach or one driven by local considerations. For example, an Indian scholar would not be expected to take up the analysis of a religion that under ordinary circumstances has no relevance in India. We also propose that vendetta-driven approaches and reactions against earlier prejudices and biases should have no place in twenty-first century historiography in so much as they interfere with a logical approach to issues.

The historian, by adopting a scientific and a transparent approach to historiography can make a world of a difference and can help the general public rediscover their roots. This can potentially relegate superstition, dogma and all its attendant ills to the background, thereby sparking a cultural revolution of sorts. Needless to say, this process has already begun, with several researchers taking up an impartial study of Islam and other religious, but this process must be accelerated and taken to its logical conclusion.

Principle # 14 Proactivity: Adoption of DPPF and Heuristic techniques

Proactive behavior may be defined as acting in advance of a future or a possible situation, thereby modifying a course of action for the benefit of society or science, rather than just reacting to an event without envisaging a course of action. Proactivity means taking control and making things happen and altering the course of history rather than just adjusting to a situation or waiting for something to happen. We had introduced the concept of DPPF techniques or Dialogue between Past, present and future techniques in our paper. This would be an interface between the past, present and the future, and would help the historian contribute meaningfully to human endeavor.

We may also refer to the Goals, Opportunities, Extraneous factors, Strengths and Weaknesses approach (GOWEST) approach which we had proposed as a part of our framework. From the point of view of our approach,

(a) Actions are shaped by the freewill of actors and hence, their actions cannot be directly controlled, but only indirectly influenced,

(b) The free will of actors is in turn shaped by positive factors and negative factors which exist in the environment and are the focus of this approach. Examples of positive factors include a first-class and a relevant education system, facilities available for individuals to reach their full potential, a good legal framework, a good social security system and political stability. All the other principles advocated in this paper will contribute to a positive environment in the long-run by improving the intellectual climate and ameliorating the well-being of society. However, this list does not purport to be an exhaustive and a

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comprehensive and a list of positive factors must be prepared by a historian from time to time, and may draw heavily from our principles and other principles. Examples of negative factors include high unemployment, large class inequalities, poor laws or political framework, negative cultural traits in society, poor relations with neighbouring states etc.

(c) Positive factors affect the freewill of individuals positively such that they carry out positive acts which further benefit society and set in motion a chain of events that is good for society

(d) Negative factors tend to affect the free will of actors negatively and society may go into a downward spiral. This may be referred to effects of positive and negative forces and may be the subject of the cause and effect analysis

(e) The historian must also acknowledge the fact that there can be exceptions to every rule, and a denial of this crucial fact would greatly undermine a pragmatic approach. From the point of view of our approach, over-simplification is anathema.

(f) However, the historian may work towards the creation of a body of knowledge that can study the causes and effects of various events, while always leaving space to accommodate the free will of actors, and this body of knowledge and heuristic models must be continuously built upon, if the historian has to acquire greater competence in building scenarios of the future.

(g) While the historian may not have control over positive and negative forces in a society, he would be well-advised to study those using historical and contemporary data. He can then collaborate with other scholars as required. These are known as Inter-disciplinary approaches or IDA's from the point of view of our paper.

Thus, as a possible extension of his traditional work, a historian can, based on his knowledge and database of the past, and his ability to carry out a root-cause analysis of events, work on building scenarios of the future in collaboration with non-historians. He can also partially shape it, as many concepts in this paper are aimed at such a scenario.

This is a very powerful and a multi-faceted tool we propose to identify areas of improvement which can then be used to augment the positive forces and contain the negative ones. Thus, the historian can even act as a bridge between the past, the present and the future, and this can one day, become an exciting area of study, such that historiography becomes the basis of futurology. We may refer to this as 'Dialogue between the past, present and future' techniques, and this was a new concept in our paper. (DPPF techniques).

This can again be used to generate a list of areas of improvement which will eventually culminate in a plan to augment the positive forces, and reduce the negative forces. Similarly, this can be used to identify already existing positive and negative forces. Strengths of a society can be identified based on a Deep Historical analysis performed by the historian or based on analysis of recent data. These can be used in the process of goal-setting, which can be used to identify more positive forces and mitigate the negative forces. Weaknesses of a society can also be identified by a historian based on a deep historical analysis or analysis of recent data.

These can be used to identify areas of improvement and set more goals which will increase the positive forces and reduce the negative forces. The premise of the approach is that while the goals, opportunities, strengths, weaknesses, positive and negative forces can change from time to time and from context to context, the underlying concepts of this approach do not, and that the scholar is free to use this approach in almost any context within the DPPF framework. Another underlying principle of the DPPF framework is that man is the only animal which can change its collective destiny through individual or collective freewill, and can bring about social change and radical changes to society without changing the innate nature of man. No other animal has the capacity to do this. This, according to this approach, is the key and most important differentiating factor between man and other animals.

With almost no modification, this approach can also be used to carry out any kind of Deep Historical analysis (DHA). In such a case, positive and negative forces in a society in a given point in time need to be understood and a Root cause analysis needs to be carried out using the tools used in this paper,

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or other approaches. These be traced to (a) strengths of the society (b) weaknesses of the society (c) Extraneous factors, and this approach can be further used to analyse society. (d) Goals here would be the motivating factors of an individual or a set of individuals. (e) Threats here would be the extraneous threats or limitations imposed on the individual or the individuals, causing any aberrations, or modification in behaviour, and ultimately determining his or their actions. (f) Opportunities here, would shape goals, and this approach can, more importantly be used to identify lost opportunities which can then be taken by for an RCA, linking them to strengths and weaknesses. This approach can be used for both societies and individuals. A formal Cause and Effects analysis then needs to be prepared for both the positive and the negative forces (FCEA) which must be prepared with a great deal of care, and always guarding against oversimplification or superficial analysis. The next step in the case of DPPF would be a Formal Plan for the Mitigation of Negative forces (FPMNF) – This is not required in case of DHA.

The final step would be a Formal evaluation and Documentation of learnings (FEDL) which can then be used to predict future events in the case of DPPF, and can be an invaluable aid for other scholars and historians in the case of DPPF and DHA. Thus, with modifications, and as shown above, it can be used both for DPPF and a Deep Historical analysis, and can easily be extended to cover other areas such as Cliometrics. This approach should be seen as a vast improvement even over ideas put forth by the Annales School and other schools, and can become an all-encompassing tool and a tool with wide-ranging ramifications.

We may draw our readers' attention to the fact that many techniques that are widely used today across disciplines did not exist in Karl Marx's time. Examples of such techniques are Root Cause Analysis, Causal Analysis, Back casting, Failure Modes and Effects analysis, Cross-impact analysis and Causal Layered analysis, and a historian could well do to make full use of them. Again, the historian must guard against simplistic explanations always which always undermine a better understanding of the past and must also avoid the pitfalls of reductionism. The historian may proceed to demonstrate that will a reductionist approach may work for some sciences; it may not be applicable in toto in the field of historiography. As opposed to the anarchic notion that mankind does not have a destiny, it must be emphasized in our approach that destiny is made or changed through human will and effort, and this realization forms the bedrock of all DPPF techniques.

From the point of view of DPPF, goals would be the goals that have been identified for a society by the government, other institutions and organizations, other scholars etc., or based on any known areas of improvement. These could be long-term goals, or long-term goals. Some may be localized; others may be applicable beyond the area in question. This can be used to generate a list of areas of improvement which will eventually culminate in a plan to augment the positive forces, and reduce the negative forces. The already existing positive forces through which goals can bear fruit will also be identified. This approach will also automatically identify the negative forces. The next step would be to identify opportunities that exist or the opportunities the society is missing out on. These can either be long-term or short-term.

DPPF techniques are also expected to heavily utilize heuristics as a knowledge database. This knowledge database will then be of a great value to aid in all kinds of decision making. This can veritably be a historians trump card as no scholar in any other field of study will be privy to this kind of information

DPPF techniques are also expected to make heavy use of statistical tools such as trend analysis, regression analysis, extrapolation techniques and predictive analysis not only for analysis of past trends but also for using such information for decision-making and predictive analysis.

Databases that are created by historians in line with this approach can be of many types and can contain different types of information. All these will greatly enhance the calibre of historians and help them to influence and serve society, and will allow him to be consulted routinely or in case of a dire need or catastrophe. A few examples of such databases are below. These will also be complemented wherever necessary by more detailed analyses including root cause analysis and trend analysis.

1. A database of stratagem in war with a detailed analysis thereof and its possible impact on decision making;

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2. A history of drug abuse with a detailed analysis thereof, including patterns and trends;
3. A history of inter-racial violence with a detailed analysis thereof, including patterns and trends;
4. A history of human migrations with a detailed analysis of the causes thereof, with an analysis of implications for future migratory patterns and other fields of anthropology;

Extensions of this approach can include the following with additional benefits to other fields of science:

1. Providing inputs to linguists in carrying out an analysis of dynamics of language spread based on historical trends;
2. Providing inputs to anthropologists during the course of all their endeavours (This may become one of the routine duties of a historian in the years to come)
3. Providing inputs to other researchers in analysing the history of science and technology;
4. Providing inputs to researchers and students of political science in analysing past trends.

Specialized historians would also be well versed with select and relevant statistical tools and techniques in the twenty-first century, or would at least make use of statisticians wherever required.

Principle # 15 Avoiding intellectual aloofness and nerdism and promoting practicalism

A Nerd is a term usually used in a negative context to describe a person who is excessively intellectual, obsessed with obscure or off-beat topics and activities, introverted and aloof, and consequently often lacking elementary social skills. Such a person may spend disproportionate amounts of time on unpopular, obscure, or non-mainstream activities, which are generally either highly technical or disinterest the wider public, and usually to the exclusion of more mundane and mainstream activities. Additionally, many nerds are described as being shy, idiosyncratic, and eccentric, and be disinterested in, or even put off by more mainstream activities. Nerdism is a term used to describe the activity of a nerd or nerds in general.

Nerds typically do not seek to understand the practical implications of their work, and are driven entirely by their own interests or whims. While many brilliant thoughts and ideas were conceived in this fashion, this can never be the be-all and end-all of all endeavour. A scholar must take into account the needs of not only his own times and geography, but also understand the utility and implications of his endeavours across space and time, both within and outside his own field of study. This would be one of the social duties and responsibilities of a historian, and consequently, he would need to reconcile his own creativity and talents with the demands and needs of society and science. In other words, a scholar needs to avoid ivory-tower, arm-chair and lounge-lizard scholarship in all but the narrowest set of circumstances and situations.

This, rather unfortunately, has been the bane of many a well-intentioned approach. It is an open secret that the Nineteenth century school of Indology was conceived in this fashion, with its progenitor never having set foot on Indian soil; the Marxist school of Historiography, despite some well-meaning opposition to the Nineteenth century school of Indology, was essentially cast in the same old mould. Its practitioners are still essentially stuck in the same old ways. This may have been because of the narrow Euro-centric circumstances in which their ideology first evolved and the narrow gamut of concerns it primarily sought to address. Its innate self-contradictions would have essentially sealed the flask, and ensured that all pretences to debate, openness and transparency remained a sham and a wicked lie. No wonder then, Marxist historiography remains a closed group, and in the truest spirit of any ideology, choose to address themselves as practitioners of a particular school of thought. Given the fact that suppression throws up unhealthy counter-reactions at any rate, they have argued that all schools of thought, including those birthed with the vilest of intentions and in the most nefarious of circumstances have been allowed to flourish. This is something we have always wanted to avoid at all costs, and with an approach that would render them meaningless and cast them down the road to oblivion in the longer run.

Pre-defined agendas also engender nerdism in the longer run; it is expected that a scholar would hunt down newer vistas and horizons pro-actively and aggressively and incorporate them into his arena; this is an idea we have always aggressively promoted. An Indian scholar attempting to research Tanzania

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or Argentina, for example, would be expected to familiarize himself with the local cultures using a hands-on approach. This would require interactions at multiple levels and necessitate the rejection of an ivory-tower approach. The substitution of a dreamy-eyed, lotus eater like approach by a more pragmatic one would also lead to a situation where a scholar's efforts are better aligned to ground realities. This would also lead to a quantum increase in scientific knowledge in the longer run, vindicating any other principles of this paper.

To put it in layman's language, a historian must pursue down-to-earth approaches in lieu to fantasy-driven approaches, and this would help him serve society even more.

Principle # 16 Transparency and openness – avoid careerism as far as possible and emphasize collaboration

Openness is a concept that is characterized by an emphasis on transparency and free, unrestricted access to knowledge and information, as well as collaborative or cooperative approaches and sharing of knowledge and information based on mutual trust and co-operation as opposed to secrecy and clandestine and surreptitious approaches. Transparency is the state of being transparent and open to ideas.

Openness and transparency are cherished and sought-after ideals and values that can bring about a revolution in scientific endeavour and a quantum increase in output. Openness and transparency need to be balanced with personal goals and careerism. Those who try to undermine the importance of openness or transparency point out to the unhindered existence of rival groups or attempt to over-emphasize the role of academic freedom in science and the need to pursue one's own goals and ideals; However, in the real world, a healthy compromise may be pursued between the two.

Openness and transparency have been lacking in many fields related to our core publications such as Indology, Indus archaeology and Indian historiography. The reasons for this are not too far to seek. Among them are Ideology-driven approaches, nationalism, racism, careerism, lack of awareness and knowledge on allied topics and dogma. Openness and transparency have typically been compromised when working across cultures, and these must necessarily die off in the post-globalized epoch.

Principle # 17 Reliabilism

Reliabilism is an approach to epistemology and the knowledge creation process that emphasizes the truth component of a belief system or a knowledge-creating methodology or any other general scientific method. Seeking out reliability and reliability-driven processes and metrics is one of the core functions and the sacred duties of a scholar. It also emphasizes that the output must be reliable, at least most of the time, if not all the time. In other words, the objective must be to progress towards a state of total reliability, i.e. where false outcomes must be one hundred percent or close to one hundred percent. To begin, we can at least state that the true outcomes must greatly exceed false outcomes, and methods to this end must be incorporated in principles and approaches. How have Hindutva, Marxist scholars, Dravidian nationalists and Euro-centrists fared in this aspect? The jury is still out here, but we have incorporated methods to put their approaches to a fair and rigorous examination, so that this issue can be easily and quickly brought to rapid consummation.^{42 43 44}

One must emphasize the need for hard or irrefutable evidence and data at all times to back up all statements or claims. In certain cases, however a compromise is in the best interests of scholarship particularly if useful information is lost to the public if narratives are left out due to want of irrefutable data, and if such loss of potentially useful information is detrimental to society or other fields of study.

This would count as a great loss to the world of scholarship. Scepticism is healthy, but cynicism beyond a point would work against the interests of scholarship. We insist that this be made one of the key

⁴² Reliabilism and contemporary epistemology Alvin I. Goldman Oxford 2012

⁴³ Structural Reliabilism: Inductive logic as a theory of justification Pawel Kawalec Springer science + Business media Dordrecht 2003

⁴⁴ Contemporary theories of knowledge Joseph L. Pollock and Joseph Cruz Rowman and Littlefield publishers Inc 1999

principles of this paper, and will continue to insist that scepticism beyond a point would be unhealthy and would constitute a bias.

As a result, this would automatically act against the interests of science and the promotion of scientific knowledge. In cases where risks are involved and the author feels his scholarship may not be infallible, qualifiers may be added, and the details of the risks involved with such interpretations may be laid bare to the public. In such cases, details such as the source of the data, and methodology may be made public as necessary. We have proposed that various presentation layers be used to target different audiences, and such scholarship may be targeted only to the appropriate or specialized audiences, if necessary before a consensus can be forged.

One must reiterate, that an over-emphasis on irrefutability of evidence is as great a crime as scholarship that is not backed by sufficient data as it would impede scientific progress and act against the natural process of hypothesis-building. Additionally, a clear line of distinction needs to be drawn between history and mythology, and while doing so, logical as opposed to ideological standpoints need to be taken as Hindutva and Marxist ideologues have adopted diametrically opposite viewpoints. There is undoubtedly a wealth of historical information in the RV as opined by stalwarts such as Witzel and Possehl themselves, and elementary common sense would point to this, and techniques to clearly winnow the truth in such cases must be developed and formalised by scholars.

The dogmatic Marxist viewpoint is unnecessary, meaningless and superfluous because, it, like most other Marxist paradigms and constructs, achieves nothing, leads to a polarization of views and weakens their own case. The Marxist approach, wherever it works against the interests of science, and leads to an ideologically driven discrimination between various periods in history, is nothing short of a crime. In any case, the archetypal, dogmatic Marxist approach is likely to count as sceptopathy which all things considered, may be no less a pseudo-science than other ideology-driven approaches are.

Principle # 18 Scepticism to the right degree

Scepticism may be defined as a questioning attitude towards ideas, opinions or beliefs that might otherwise be accepted uncritically by the layman or other individuals. According to the Skeptics society, "Scepticism is a provisional approach to claims. It is the application of reason to any and all ideas—no sacred cows allowed. In other words, scepticism is a method, not a position."^{45 46 47}

The characteristics of a sceptic are as follows

- A sceptic questions everything he sees or comes across and takes nothing at face value.
- A sceptic never hesitates to ask questions where he is in doubt
- A sceptic tries to understand new things and is always keen to expand his knowledge and broaden his horizons.
- A sceptic applies critical scrutiny and inquiry to his own works and always pursues objectivity.
- A sceptic withholds judgment and does not jump to conclusions quickly or easily.
- A sceptic seeks out the truth and considers it to be his primary goal.
- A sceptic thinks in terms of myriad possibilities rather than in adhering to unchanging and dogmatic views.
- A sceptic weighs evidence on all sides carefully rather than jumping to hasty conclusions.
- A sceptic never makes uninformed decisions

Scepticism, is undeniably one of the foundational values of our approach; however over-scepticism may present its own problems and may stake claim to be a pseudo-science in its own right, and rather curiously so. One must reiterate here that over-scepticism, pathological scepticism or sceptopathy may

⁴⁵ Cicero on Academic skepticism Translated by Charles Brittain Hackett Publishing Company 2006

⁴⁶ The history of skepticism from Savonarola to Bayle Richard Popkin Oxford University Press 2003

⁴⁷ Scepticism: Wonder and Joy of a Wandering Seeker Anne Naess Springer 2005

be another kind of disease and may by itself quantify as a pseudo-science. This issue has been under-investigated over the ages; it may be time to step up research on this particular phenomenon by linking them to practical and real-world examples and scholarship.

Over-scepticism has its own peculiar and undesirable characteristics. For example, such a person usually fails to draw the boundary over the kind of information he requires to reach a final conclusion, and such an approach invariably and inevitably leads to a stagnation of scientific output to the detriment of science and society.

An sceptopath typically tends to be a dogmatist, peddling his own line of thought ignoring contradictory evidence that exists and is visible and apparent. There are many examples of this kind of an approach. The Marxist historians' penchant for declaring that virtually nothing existed between the Indus Valley Civilization and the birth of the Buddha is a case in point, and is linked with ideological predispositions. Yet another example of over-scepticism may be found in the book 'Did Muhammed exist' by Robert Spencer where the author questions the existence of Muhammed itself, despite all the evidence to the contrary. One may use QEPIS here as a ready tool for analysis. Neo-centrism can help us avoid the hazards and drawbacks of sceptopathy too, which itself is a threat to the healthy growth of science in general.

Principle # 19 Rigorous and accurate but doesn't not emphasize too much of precision where such precision is not warranted or possible

Precision may be defined as the quality of being exact and accurate. Precision may also be defined as exactness in a measurement or a metric. It may also be defined as attention to detail. A historian is expected to detailed without being over-obsessive with minute specifics or seeking out precision where precision is not warranted or achievable. Likewise, a historian is also expected to be precise without losing sight of objectivity. We believe our research papers on Indology amply bear out a situation where precision was achieved without compromising on objectivity, and this was done through innovative use of multi-disciplinary approaches.

Principles # 20 Inter-disciplinary approaches

Inter-disciplinary approaches refer to the idea that data and evidenced from as wide a base as possible including all fields directly and indirectly related to historiography and that a historian must interact with a wide gamut of scholars and experts in allied fields. This would, at the end of the day lead to an exponential increase in knowledge not only in historiography, but also all allied fields as well. This would be the historian's payback to science as a whole. Sadly, and unfortunately, historians across the world do not practice this at all, and do not consider it to be within their purview as well. This has stymied progress and has closed the doors to many vistas and opportunities. Marxist historians, with all their antiquated and expired approaches, have been at the bottom of the list all along. No wonder then, that they have been equated with obsolescence and senility. Remedy this, and we will knock on the door of a new age of frenzied progress in Anthropology.

Principle # 21 Innovative and creative thinking

Innovation may be defined as the action or process of innovating and discovering new horizons of knowledge and learning. Innovation may also be defined as the bringing together of ideas in a way that would positively impact society. Needless to say, innovation is crucial to the continuing success of any endeavour or field of study. Creativity is an approach that values the structured creation of tangible ideas and tools with a palpable benefit to society or science. Innovation and creativity are diametrically opposed to a call to authority, adherence to antiquated methods and coalesced approaches and of course even static and non-changing principles, methods and approaches. That is why the Marxist approach to historiography may at best be regarded as low-grade science, and its practitioners are already senescent, and the field may be in inevitable and terminal decline. We may have crossed the Rubicon, and the swansong may have been sung.

We strongly emphasize the idea that innovation and creativity must be the hallmark of a good historian.

Principle # 22 Coherentism

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Corehrentism may be defined as the internal consistency of a body of work. A body of work must possess as few internal contradictions as possible for it to pass the test of validity. It must not also be inconsistent as far as possible, with other works in the field. A related theory is the Correspondence theory of Truth which states that the truth contained in a claim would be determined by how it relates to the world in general, and to other believe systems as well. A simpler term to describe this would be internal and external consistency.⁴⁸

Principle # 23 A layered approach to study and presentation

We had proposed a layered approach to research and presentation and the details are below:

Research layer

The research layer would comprise the topics that have been shortlisted for research (from a long list) after a careful consideration of the merits of each case. The list of topics needs to be prepared after generation of objectives, discussion with specialists, identifying problems faced in the dissemination of knowledge to a general audience, and such topics need to be ordered on a scale of importance using the techniques explained in our papers. Topics may also be added based on a set of triggers i.e. discovery of new or hitherto unknown evidence that may necessitate a change in priorities. Thus, the direction of research may be determined based on a combination of a pre-determined plan and fortuitous events. Generating research output, and disseminating it to other scholars will be one of the key functions of a historian, as also will be a healthy collaboration with them. A quest for the continuous expansion of the body of historical knowledge would be the key driver for historiography

Presentation layer

The presentation layer is a subset of the research layer and consists of four sub-components i.e. General Presentation layer, Student's and Academician's layer, Localized presentation layer and research layer. Each sub-component is expected to cater to a different audience, with a broad overlapping area. As such, the presentation layer exists only as the sum total of its sub-components, and otherwise does not have a locus standi of its own. The presentation layer would contain all aspects of the output of the research layer except details the researcher would not, in the normal course of events be required to share with others such as working notes or his internal version history. While the approach to be followed may vary in each case, a key concept to be understood is that there can be no factual contradictions or inconsistencies across layers under any circumstances. Only the emphasis on subtopics can be allowed to vary.

General presentation layer

The general presentation layer is used to present information to a non-specialized audience or a general audience, and would be largely driven by requirements of the target audiences. This can comprise of the general public, the layman who may have an interest in history and some types of researchers as well. This will not however cover students and academicians.

Student's and Academician's presentation layer

The scholar must take great care in presenting information to this kind of an audience, which may be further sub-categorized based on maturity, and as a rule, controversial aspects of history or untested hypotheses must be left out from this layer. If the scholar feels the audience is mature enough, such material can be added with qualifiers. This approach also permits bowdlerization or sanitization of information at this layer, and even encourages it under specific circumstances i.e. if it has no or limited historical value, may have other adverse effects such as the promotion of communal hatred, or if the target audience is not mature enough for it. Examples of such material are gorier details of the Crusades, the Spanish Inquisition or the details of demolition of Hindu temples by Muslim invaders. This is another key principle in this paper, and may help maintain a modicum of communal harmony. Scholars may prepare guidance notes for academicians and teachers wherever required on various topics. Ideally, the scholars approach must be more fact-driven and less interpretation-focussed, but

⁴⁸ Coheretism Jonathan L.Kvanvig Baylor University Oxford University Press 2010

the scholar must keep in mind the maturity of the audience to achieve a healthy balance between the two.

Localized presentation layer

The local presentation layer is usually a subset of the student's presentation layer, or the general presentation layer, in some cases, and is used to present information to a local audience, and would be largely driven by requirements of the target audiences, and would take into account the unique requirements of the region. For example, the scholar may be required to address specific needs to the region such as the need to maintain communal harmony, religious fundamentalism etc.

Specialist's presentation layer

The specialist's presentation layer is usually a subset of the presentation layer and is used to present information to a specialized audience, and would be largely driven by requirements of the target audiences, and would take into account the unique requirements of the target audience. This would however be a subset of the presentation layer and would not conflict with it in any way. It would usually contain more information than the general presentation layer, and would overlap with the localized presentation layer as well. The specialists layer would also comprise sub-layers targeted at each class of specialists, and in extreme cases, may comprise of articles targeted at individual scholars.

The objectives of a layered approach to study and presentation are as follows:

1. To ensure that a scholar pursues as detailed an analysis of issues as possible without any regard to the maturity or immaturity of the audience or without having to worry about the target audience at all.
2. To ensure that all results of a detailed analysis are available for the scholarly community in general.
3. To ensure that target audiences are presented only information required by them as a matter of course.

We strongly believe that a layered approach is mandatory not just in historiography, but in all other fields of scholarship as well. Gross over-simplifications such as the Out of Africa theory which may have been conceived with a popular audience in mind will then be left to bite the dust.

Principle # 24 Use of metrics and measurements and feedback-driven course corrections

Historians may also want to utilize metrics and measurements as a part of all their endeavours as these will greatly aid progress and trigger course corrections wherever warranted. An example of a metric a historian can use in his work is obtaining feedback from the public and the man-in-the-street in general. He can elicit it, of course, from other practitioners, and of course, from all his own stakeholders and their proxies. This would typically include teachers and educationalists. Such metrics can greatly aid the self-development of the scholar as well, and ⁴⁹ help him in his career. This will of course further the cause of science and help society as well. A discussion of metrics in science was published in the scientific magazine 'Nature' was back in the year 2010, with many practitioners supporting the idea of metrics-driven decision making for individuals' contributions, among others.

Principle # 25 Intuition and common sense as opposed to rules of thumb

Intuition may be defined as the ability to understand something instinctively without the need for a conscious or a formal reasoning or with resort to dependence on formal or detailed instructions. Intuition primarily relies on hunches, inklings and gut instincts which become reasonably reliable and accurate though experience and practice. Intuition can be said to be a culmination of processes which combine one's own strengths and understandings with the needs of society and science. It is possible to build up knowledge through intuition alone with period fallbacks to extrinsic sources. Controlled creativity and

⁴⁹ <http://www.nature.com/news/2010/100616>

innovation is a welcome step and would be in diametric opposition to dogmatism. Many scientists have opined that intuition is a necessary pre-condition for innovation and creativity.

A rule of thumb, on the other hand, may be described as a guide based on rule of the book or unstructured experience rather than sound reasoning. Marxist historians, as usually fail this litmus test rather badly, as they fail to innovate and keep up with the times. In this era of globalization, we are already probably on the threshold of momentous change. However, archaic approaches can upset the apple cart and spoil the party.

A scholar relying on intuition would also be able to form his own opinion of the work done by other scholars and would be able to avoid the perils and pitfalls of dogmatism.

Principle # 26 Formulate frameworks, processes and methods that are attached to principles

A framework is an essential supporting structure or a superstructure of a philosophy or a line of thought. It may be described from our perspective as a bridge between a principle and a method, a procedure or a process. Frameworks are expected to be more stable and robust and designed essentially for the longer term as methods, processes and procedures would depend on them and leverage their attributes. Frameworks need to be linked to principles, and it needs to be amply demonstrated the frameworks are in conjunction with our principles and not opposed to them at any rate.

Processes and procedures that are aligned to frameworks and principles must also be develop and evolve constantly. We believe that a library and inventory of frameworks, methods, policies and procedures must also be developed, and such information be archived for future use. All this is expected to lead to a quantum increase in scientific output. It would not be unusual in future to find historians and scholars to dedicate a significant portion of their time and resources to these.

Principle # 27 To focus of competence and self-development

Scholars, as such, are expected to focus heavily on self-development and learning in the era of fast-paced technological change and ground-breaking inventions and discoveries. This is a pre-condition and a pre-requisite for survival and a passport and a ticket to success in this cut-throat world. Unhappily, this aspect has been neglected in many sub-disciplines of historiography and schools of thought, Indology and Marxist historiography not being the least of them both of which have been caught-up in a time-warp.

Following the other principles mooted and envisaged in this paper can also ensure this, as the entire field of study moves into an upward spiral and trajectory. This would be one of the stated pre-requisites of the Twenty-first century school of historiography and a necessary concomitant toward achieving 'Scientific progress at the speed of light'.

Principle # 28 Understand human and reader psychology

Another core principle of our approach would be to understand human and reader psychology as this would be an essential ingredient of success. Marxists have failed utterly here, at least in the Indian context, and again co-operation, co-ordination accompanied by transparency and openness would be the key. Religion, of course cannot be wished away with a magic wand; explain the origins of Indian culture logically and clearly, and incorporate it into the scientific curriculum, and Hindutvavaadins will no longer hold sway.

The Marxist approach of suppression, is clearly counter-productive and throws up unsavoury consequences. Marxism as a political ideology has almost ceased to exist, but other aspects of Marxist thought have not. With the heyday of Marxist thought now behind us, it is now clearly time to bring about a paradigm shift and change in thinking.

Principle # 29 To pursue need-based revisionism wherever required

While revision of a body of work may be warranted as data expands, as new evidence is found, or if new interpretations need to be accommodated, the historian must guard against ideology-driven

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requests for revision, as were common among Hindutva ideologues in India in the 1990's and the 2000's. However, some of their criticism against the then current historical models may have been justified as these were widely believed to have been outdated. However, their well-known Machiavellian techniques of using these as subterfuges to present other approaches with phantasmagorical attributes was extremely dangerous. Hindutva revisionists then stooped to very low levels such as falsification of evidence to further their own ideology, and one such instance was exposed by Michael Witzel of Harvard University, and Steve Farmer (Horseplay in Harappa, Frontline, 2000).

One approach to thwart or pre-empt revisionism is to document limitations and criticism of current approaches thoroughly and meticulously and proceed to find solutions to all vexatious issues and problems within the ambit of mainstream scholarship itself, and on a prioritized basis, to nip revisionism arising from other sources in the bud and to prevent fools from rushing in. All new evidence arising from various sources has to be examined from an objective and dispassionate viewpoint, and changes must be brought about within the realms of mainstream historiography. Mainstream researchers must also learn to take all constructive criticism in their stride, and respond to it objectively.

This is in addition to constant introspection. Of course, if this has to happen, all ideology-driven and shambolic or sclerotic approaches will need to be driven out from the purview of mainstream scholarship, and until this happens, mainstream scholarship will always be at a risk of being hijacked by people with vested interests. James McPherson, writing for the American Historical Association, describes the importance and importance of revisionism as follows:

"The 14,000 members of this Association, however, know that revision is the lifeblood of historical scholarship. History is a continuing dialogue between the present and the past. Interpretations of the past are subject to change in response to new evidence, new questions asked of the evidence, new perspectives gained by the passage of time. There is no single, eternal, and immutable "truth" about past events and their meaning. The unending quest of historians for understanding the past—that is, "revisionism"—is what makes history vital and meaningful. Without revisionism, we might be stuck with the images of Reconstruction after the American Civil War that were conveyed by D. W. Griffith's "Birth of a Nation" and Claude Bower's "The Tragic Era. Were the Gilded Age entrepreneurs "Captains of Industry" or "Robber Barons"? Without revisionist historians who have done research in new sources and asked new and nuanced questions, we would remain mired in one or another of these stereotypes. Supreme Court decisions often reflect a "revisionist" interpretation of history as well as of the Constitution.⁵⁰

Data-driven revisionism may well be the need of the hour in the field of Indology for example, as outdated textbooks may have already begun to throw up a series of unhealthy and unintended counter-reactions. While attempting revision of textbooks all the principles proposed as a part of this paper as well as the principles of good science apply.

Principle # 30 Restrained and Responsible Nationalism

Nationalism can be tolerated and sometimes even encouraged, from our perspective, provided these are not against the interests of science. The expression 'Science first, society first' will always prevail, and national integration through historiography must be achieved within the framework of this principle. Nationalism must also not tread over ethnic rights and rights of religious and linguistic minorities, and historians must pay more than just a lip service to this, as they have a major direct and indirect role to play here. All this must be achieved within the framework of a 'Science first, society first' approach. How have Marxist historians fared here? This assessment may be best reserved for our readers and other scholars.

Principle # 31 Communication of results to the people

There have been outstanding stalwarts who dedicated their entire lives to the popularization of sciences and to the eradication of popular misconceptions among the masses and the larger populace. Among

⁵⁰ <https://www.historians.org/publications-and-directories/perspectives-on-history/september-2003/revisionist-historians>

them have been geniuses of the like of the Cosmologist and award-winning author Stephen Hawking and astrophysicist Carl Sagan. Rationalists have also played a major role in India and elsewhere in educating the public of the hazards of superstition, blind faith and belief. In India, for example, prominent rationalists have included Abraham Koor, H Narasimhaiah, Basava Premanand, and Sanal Edamaruku among others. Some of them were confirmed and hard-core atheists while many others were not, preferring to describe themselves as just agnostics or free-thinkers.

However, and rather interestingly and puzzlingly, other ideas and schools of thought such as occultism, reincarnation, telepathy, clairvoyance, astrology, horoscopy and fortune-telling which have infiltrated into the popular, public consciousness. While this is not *prima facie* wrong, this is baffling in its own way, because one would expect at least a small group of committed thinkers to analyse the paradoxes involved between mainstream scientific thought and supernatural ideas. Curiously, this has not happened at all with each school of thought averring to its well-entrenched ideas and prejudices. Agreed, there were some efforts such as those conducted by the Society of Physycal research in the 1880's, but these largely remained uninfluential and one-off. Neo-centrism would help in no small way, but popularisation of mainstream scientific ideas is a pre-requisite to help the greater public develop an informed opinion and form a balanced and an independent assessment of issues involved in the game. Marxist historians may have failed miserably here, either because this was not one of their avowed objective, or because their ideological biases would have ensured that all their well-meaning effects and intentions would have come to nought, even producing unsavoury consequences in the process and throwing up wholly-unanticipated counter-reactions. Many scholars have stressed the need to popularize sciences among the masses as a weapon against pseudo-science. Among them was the American astronomer and cosmologist Carl Sagan.⁵¹

While executing this approach, common-sense principles and cultural and religious backgrounds need to be considered always, as also the other parties point of view, and this would be an essential component of success. In India, explaining the roots of the local culture or cultures in a logical way and not through the prism or looking glass of ideologically-motivated individuals such as Marxists, Dravidian nationalists and certainly not Hindutvavaadins. In Islamic cultures for example, creating a logical awareness through a logical and an unprejudiced investigation of the origin of Islam itself can be a magic-wand and can bring about a magical transformation of peoples thought processes. This would be in stark contrast to minorityism as unfortunately practised by political parties in India, and perhaps even elsewhere. We expect this to be the 'next big thing' in historiography as they work in rationalists, scholars of science and others to bring about a transformation in attitudes and outlook.

Principle # 32 Constant evaluation and re-evaluation of output to stated principles and quality-peer review

Historians are expected to understand and put into practice, all the principles stated in this paper. This would need to be done in true letter and spirit, and keeping in mind the large interest of science and society in mind. However, checks and balances need to be put into place, and a historian as such, is expected to constantly examine and re-examine his own as well the output of his contemporaries and other historians and evaluate them in the light of our principles. These will prove to be a veritable eye-opener and can enable potential course-corrections to be adopted early. A healthy peer review-process and appraisal of other scholars' work would go a long way in furthering our avowed objective of 'scientific progress at the speed of light'.

Principle # 33 Allowing room for differences in opinion

We will also state at the very outset that the Twenty-first century school of Indology does not claim to be a homogenous entity devoid of tolerance for dissent or differences of opinion. As a matter of fact, these should be encouraged (especially those pertaining to and arising from errors of omission or commission, given the reality of human fallibilities and the fact that scholars cannot be expected to adopt encyclopaedic and multifarious approaches to issues), and would be an essential pre-requisite for the healthy growth of any science, historiography included.

⁵¹ The Burden of Skepticism Carl Sagan, The Skeptical Inquirer Volume 12.1, Fall 1987

Many scholars who were living in a self-defined world with self-imposed outlooks, may then be forced to adopt course corrections. However, we would still like to differentiate between constructive criticism and ideologically-driven criticism and differences of opinion driven by careerism and personal interest. There would be a wide difference between the two approaches both from the perspective of intent and execution. The former would be in full conformity with all the principles advocated in this paper, while the latter would negate and undermine them fully. Again, the ill-effects of careerism can be curbed while ideologically-driven approaches can be eliminated in the longer term. The laity will be far better off from all of these.

Although differences in opinion may present problems in the short-term, it usually always offers tremendous benefits to science and society in the long-term, and taking these approaches into consideration can be quite literally a manna from heaven, and can trigger an explosion in scientific knowledge.

Conclusion

We have deliberately presented the principles of the proposed Twenty-First Century school of Historiography in a logical and self-explanatory manner with the fervent hope that it would strike a chord among the scholarly community and general public alike. Readers also may carry out a 'Gap analysis' between most existing approaches or widely followed approaches in historiography and these proposals to identify gaps, of which there will undoubtedly be many, such that the step-up is self-explanatory and widely appreciated by all and sundry without any further enunciation. We strongly believe that the role, duties and pursuits of a historian deserve to become more wide-ranging and aligned to the needs of science and society. This will also ensure that the work and experience of scholars become infinitely more enriching, rewarding and self-fulfilling.